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In Address.¹

By M. ERICHSEN,
Adelaide.

My intention tonight is to give a paper on contract practice in South Australia—past, present and future. Contract practice in its meaning has become restricted to refer to our professional relations with friendly societies; but we have at present other and larger contracts. We as a body have contracted to protect the practices of men who are serving in the army; we have, or rather some of us have, contracted to reimburse them to some extent for their financial losses; these contracts are far more binding morally than any model lodge agreement. In addition there are contracts with various hospital boards for treatment of patients in hospital, and there has been suggested this year an increase of specialist services to lodge patients; our Council has considered that these contracts should not be extended during this critical period. Contract specialist attendance on lodge patients was first introduced in 1906, so that it is well established.

There is another form of contract practice to which I wish to refer—that is the contract entered into by medical men with various vigilance societies, district councils and hospital boards *et cetera*. The Council has laid down a definite minimum salary for this work and it is considered by some of these bodies that the fee is too high; yet the Public Service Association this year told the Government that its members could not exist on £500 or £600 a year, and wanted to act as totalisator clerks to supplement their income. However, the country medical man is being asked in some instances to accept less than this amount, and the Council asks no one to accept any such position without its advice.

Prior to 1879 there existed "The South Australian Medical Society", and, as is usual, the majority of practitioners worked more or less harmoniously together. On June 19, 1879, a meeting of practitioners was held, at which it was decided to form the South Australian Branch of the British Medical Association. There were two objectors, who considered it unnecessary to have another organization. The negotiations were carried on and the Branch was recognized by the Parent Body on November 25, 1880. At the first meeting of the Council, in September, 1879, a complaint was received from a doctor of Willunga in regard to underpayment of lodge fees, and the Council decided that it had no power to act, because the arrangements were a private contract. The chief difficulty of the Council at that time was caused by the contracts entered into by the Government with unqualified practitioners as public vaccinators. In 1880 the Council endeavoured to have the *Medical Act* amended. Of course it was not; and how futile have been our attempts sixty years later! It was then that a man obtained an American medical degree from a non-medical man in London and was appointed a medical officer of a lodge; a law case ensued, but with no success.

On April 30, 1885, the Council of the Association entered into a contract which is doubly necessary of fulfilment at the present time.

That the medical services of the Association would be placed at the disposal of the Government should such be required in the event of hostilities arising with any of Her Majesty's enemies.

A year or so later various associations for the medical treatment of the poorer classes arose; these were not mutual benefit societies, but were managed by business men, who made and kept the profits on the reduced medical fees. Of course these societies were not tolerated, but several were formed. There were complaints also that medical men were accepting low fees and that the medical officers were appointed by a few lodge members and cliques. Private agreements were made by medical men to attend patients at a yearly fee. Some of these

¹ Delivered at the annual meeting of the South Australian Branch of the British Medical Association on June 27, 1940.

private lodge patients still exist. They were treated for £1 per year and they supplied their own drugs. These contract matters seemed too much for the members of the Council of the Branch at the time, because they concentrated intensely on the scientific side of their activities. The papers read and the research work done at this period were brilliant and had an international repute.

However, in January, 1888, a circular was sent out by the late Dr. W. T. Hayward, stating that owing to the increased competition for medical appointments to friendly societies there had been a great tendency to accept these appointments at a decided reduction of the fees previously obtained. This had been brought about chiefly by the system of tendering. The opinion had been freely expressed that it would be a move in the right direction if some kind of association of surgeons to friendly societies were formed with a view to regulating the fees that should be charged and to consider various points that now and again arose between surgeons and lodges. An association was formed and called "The Association of Registered Medical Practitioners of South Australia". In March, 1889, the committee reported as follows:

They frankly express their opinion, that it would be futile to coerce the liberty every medical man possesses to give his labor, for such a reward as he deems it worth, but they are equally clear in their conviction, that voluntary concerted action among the profession on the point would be greatly to the advantage of all. It cannot be denied that the practice of tendering for medical work, not only in connection with Lodges, but also in several public appointments, is a modern innovation, and is calculated to reflect seriously on the dignity of the profession, and destroy its prospects as a field for educated men to labor in.

The object of the association was the mutual defence of the interests of the profession in South Australia. All medical men were eligible for membership. They insisted that all lodge surgeons should be duly registered. The scale of fees was as follows: 10s. *per annum* for single adult males, 6s. *per annum* for juveniles, and 30s. for families. No member was to make a reduction to lodge patients for midwifery fees. Country men were to make their own arrangements. The severance of the supply of medicine from the provision of medical advice was sought. Dentistry was an extra charge. Persons paying income tax were prohibited from being members of a lodge. Extra certificates were to be paid for. Every member must be on a surgeon's list. A conference was sought with the friendly societies to abolish tendering.

The first conference with delegates of the benefit societies was held in July, 1888; this was abandoned, although the form of agreement was very similar to our model agreement at the present time. In 1889 a meeting of lodge delegates said that they could not control their branches and that the suggestions were unsuitable. In 1890 the association applied again for an alteration in the *Medical Act*, because of the number of unqualified men practising and being appointed as public vaccinators. The act again was not altered. The legal opinion at that time was that the *Medical Act* allowed practice without registration. A man in Sydney is at present announcing himself as "Dr. So-and-So, specialist, not registered in New South Wales".

In the early nineties medical institutes and other organizations were still being formed for the profit of the promoters and there were complaints in regard to tendering for lodge surgeons' posts. In 1893 a new agreement was made with the Oddfellows. Surgeons refused to supply bottles and surgical dressings. Midwifery fees were to be a minimum of two guineas and four hours were to elapse after a message was sent before a member had the right to call in another doctor.

After this time quiet reigned in the Registered Medical Practitioners' Association, but not in the profession, owing to the historic hospital quarrel.

In December, 1899, the name of the association was changed to "The Medical Defence Association", and Dr. H. Swift was appointed president, a position which he held for many years. As early as 1900 a life insurance company asked that the fees for examination of candidates

be reduced, but the association laid down the rule (which has been maintained) that the minimum fee was to be one guinea. In 1903 the matter of the poor rate of payment for attendance to State and destitute children was raised, and it has been raised by your Council again this year. The years have not altered government policies, and both requests met the same fate. In this year also the *Medical Act* was again unsuccessfully attacked.

In 1908, after a struggle of over twenty years, tendering was still prevalent, and an important municipal contract was obtained at 10s. 6d. instead of one guinea, as was suggested. At this time the lodges were deducting membership fees as lodge members from their surgeons. Our rules passed this year prohibit this. In 1911 it was felt that as the Branch of the British Medical Association was growing and had a more representative membership, it should take over the function of dealing with ethical and contract practice matters. The Medical Defence Association altered its rules and would deal only with matters involving the defence of members in action at law.

An inquiry into the conditions of lodge work was held and a model lodge agreement was drawn up. Negotiations were carried on with the lodges until August, 1914, when medical men agreed to carry on at the old rates for the duration of the war. These negotiations were again taken up in 1920, but no agreement was reached. The Friendly Societies Medical Association proved a difficulty; it had endeavoured to work with salaried full-time medical men, which was a very unsatisfactory arrangement. Ultimately the Friendly Societies Medical Association came into the present agreement with the Friendly Societies Association. The present metropolitan lodge rates were agreed to in 1927; the agreement was for medical services only and the lodges made a separate arrangement for the supply of medicine. This was suggested fifty years ago.

Although the metropolitan lodges paid the increased fee at the next quarter, the agreement was not signed until 1931, because of the difficulties in regard to the country practitioners; as in 1888 the country men had to make their own arrangements.

In 1931 the Friendly Societies Medical Association caused an agitation in the Press and Parliament, seeking to have the unit reduced from 3s. 6d. to 2s. 6d. This meant a reduction of 1d. per week, which was very little per member, but a great deal to the medical man with a fair-sized lodge practice. The scheme failed. The fee per member was originally worked out by the Medical Defence Association at 2s. 6d. per quarter, which was half a day's pay. From 1900 to 1907 the basic wage was 5s. a day; from 1907 to 1921 the basic wage rose to 13s. 8d., an increase of 89%; the war intervening, no increase in payment for lodge fees was made. In 1921 the unit fee was raised to 3s., which did not approximate the original scheme. In 1927 the basic wage rose to 14s. 3d. and we received 3s. 6d. per quarter for medical attendance only. A member on a family list pays 2s. 1½d. per week to his lodge and the medical officer receives 8½d. I feel sure that the average lodge patient has no idea of how little of his subscription and "extras" are paid to the medical officer, and it is for medical services that he joins a lodge. In the past there was often distrust between lodge secretaries and lodge doctors; the secretary tried to get his pound of flesh from the doctor and sometimes even attempted to avoid paying for it, and the doctors in many cases regarded the lodge secretary as an opponent. Some years ago there was a great deal of bickering and unpleasantness between the Council of the Branch and the Friendly Societies Association; but our relations are now more harmonious. To obviate the feeling of distrust between lodge doctors and lodge secretaries, and to have correct lists, a special meeting was held in 1928 to consider the advisability of creating a central clearing house for lodge payments. No great interest was shown, so the scheme was dropped.

At present we are engaged in an endeavour to arrive at a Federal common form of agreement. A draft agreement has been drawn up and will be considered later at

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a special general meeting. As this agreement is at present being considered by the Branches of the British Medical Association in the several States and by the friendly society organization in each State, I propose to make no further reference to it.

During the war of 1914-1918 the members agreed with the Friendly Societies Association to attend, on the payment of one unit, the wife and family of married men who were on the family list and enlisted for service, provided that the society kept the member's name on the books. Single men on active service were to be retained on the lodge surgeon's list without payment and had the right to resume their place on the list after their discharge. This principle is being followed during this conflict. The Friendly Societies Association was asked to "freeze" the lodge surgeons' lists. There appear to be difficulties in its management, because the association has not complete control over its branches and secretaries; but it has promised to assist us as far as possible. It has agreed to notify all secretaries that no member can be placed on a surgeon's list without the written consent of the lodge surgeon. The Council earnestly asks members not to accept on their lodge list patients from the list of a medical officer on active service, but to treat the patient and allow him to remain on the absentee's list.

I have myself enjoyed my lodge practice. The common round and trivial task have furnished me with work, interest, thought and frequently humour. During the last war the lodge patients were extremely loyal to their lodge surgeons. They did not change lists and were content with fewer visits than they might reasonably have expected. I have very few vexatious or unnecessary night calls for lodge patients; in fact, more unnecessary calls come from the private patient who says that expense is no object. (Nor is it, for he quickly disregards his obligation.) I think that the doctor's general knowledge of his lodge patient is greater than that which he has of a private patient. The lodge doctor does not hesitate to go into the kitchen and learn from that angle facts which will help in the front of the house. The doctor knows more of the psychology of the lodge household than he does of that of a private patient, and he can therefore be of more help in the treatment of those conditions which are psychogenic in origin. One does not hesitate to see a "difficult case" in a lodge patient as frequently as one wishes; but if the same attitude is taken to a private patient there will probably be a charge of over-visiting. If patients are encouraged to consult one early in their sickness, very often more serious complications can be avoided. It is surprising how often your lodge patient will ask for advice on all sorts of matters outside of medicine, no doubt thinking that honesty is better than expert knowledge. Lodge doctors are often accused of making hypochondriacs of their patients; but there are always people who want a bottle of medicine, and this exists to just as great an extent in private work. The lodge patient does not tend to wander off to the newest theory in diet, massage or manipulation as the experimenting private patient does, wandering from one so-called specialist to another with decreasing funds and increasing pain.

As to the future, all of us realize that the conditions of life and our mode of living, our relations to each other and to the State, are rapidly being altered. There has been a slow evolution of these principles for some time, but now a revolutionary storm has overtaken us. Nationalization of all endeavour and effort must come. National health insurance in Australia is only postponed. We know of the hundreds of thousands of pounds spent by the Government in the introduction of the *National Health and Pensions Insurance Act* before there were any indications of a thoroughly workable scheme. National defence should come before social security. The ideal of national health insurance is, of course, to improve the health and well-being of the community by national control, and one wonders why the medical profession should have been singled out for nationalization when already, by the free will of its members, it provides so large a volume of gratuitous or underpaid public service. When one considers the magnitude and the value to the State of the

gratuitous services provided by the medical profession, not only in public hospitals, but also in private practice, it is astounding that so many of the public and the politicians are so suspicious and critical of medical men as a body. The American ideal is that the national health insurance should be run by the medical profession and not by the State. There would be "zones" with well-equipped hospitals, capable of dealing with all consultant, specialist, radiological, surgical and medical treatment, and a thoroughly competent pathology laboratory. These would be in conjunction with a communal health centre, so that there could be a complete follow-up of patients. In addition, architects, engineers, chemists and cooks would be nationalized, to see that factories and houses were well built, with proper ventilation *et cetera*; the engineer to see that machinery was safe; the chemist to see that drugs and food were pure; the cooks to see that food was properly prepared. This would really be a health insurance and a vested interest in good health, not a vested interest in ill health, as some schemes are. The insurance committee would issue to doctors, free of charge, bulletins containing the latest and most authentic reports on the progress of medicine. When governments regiment medical practitioners into the ranks of civil servants, the profession and patients must suffer. Domination, whether religious or political, causes science to lose initiative and to cease to experiment.

When the Australian *National Health and Pensions Insurance Act* was about to be brought into force we saw the large number of administrators and officials who were appointed at high salaries. In all contracts, the more persons connected with the carrying out of the contract, the more difficult it is for the medical man to do justice to his patient, his profession or even his purse. The object should be to have the control as simple and uncomplicated as possible, and our aim should be to have some constructive scheme for national health insurance; but I am afraid that political events will prove that we shall not be asked for schemes. When that time comes we cannot demand better leaders until we have made ourselves worth leading.

THE CITADEL.¹

By C. H. FITTS,
Melbourne.

THAT part of the inferior soul which is endowed with courage and passion, and loves contention, they settled nearer the head, midway between the midriff and the neck, in order that it might be under the rule of reason and might join with it in controlling and restraining the desires when they are no longer willing of their own accord to obey the word of command issuing from the citadel.

(PLATO, "Timaeus", Jowett's third translation.)

In the life of every practitioner of medicine there must be moments of regret that he is apparently forced by circumstances to use methods which his reason tells him have no scientific justification. Perhaps, less often, he will stop to question, as Socrates would have done, what he really understands by the words which he uses to students and patients with such effect. In these moments solace may come from the reflection that his work is akin to that of an artist who works in a perilous and plastic material, far removed from that of the unimaginative scientist pursuing knowledge for its own sake. Though he is mindful of the difference in material, it should still be possible to apply scientific method more fully to the principles and practice of medicine.

Strange as it may seem, the use of imagination is of the highest importance in science. The scientific method consists, first, of the careful collection and classification

¹ Adapted from a paper read before the Western Australian Branch of the British Medical Association in October, 1938.

of relevant facts; then, by means of the disciplined imagination, a scientific statement is enunciated which resumes the whole range of facts. It is not unfair to say that the discipline which is applied to the imagination largely distinguishes medicine as a science from medicine as an art. What does this discipline imply? It implies the application of criticism, the testing in every possible way of the statement enunciated, so that it is certain that imagination has not played false and that the phenomena observed are explained by the scientific statement.

It is worth remembering that the scientific method is not such a recent growth as is commonly thought. Without such method, however dimly conceived, medicine would still be wedded to magic and metaphysics, and Hippocrates would not have sat calmly by the bedside to collect and classify facts. It is right that the historical background should be remembered before judgement is passed on the scientific attainments of former days. There is food for thought even today in the gracious tribute of Dr. John Brown to Dr. Thomas Sydenham:

In order to render him due honour for originating and acting upon his own views, we must remember in the midst of what a mass of errors and prejudices, of theories actively mischievous, he was placed at a time when the mania of hypothesis was at its height, and when the practical part of his art was overrun and stultified by vile and silly nostrums. We must have all this in our mind, or we shall fail in estimating the amount of independent thought, of courage, and uprightness, and of all that deserves to be called magnanimity and virtue involved in his thinking and writing and acting as he did.

In 1651 Harvey wrote as follows in "The Generation of Animals":

And hence it is that, without the admonition of the senses, without frequent observation and reiterated experiment, our mind goes astray after phantoms and appearances. Diligent observation is therefore requisite in every science, and the senses are to be frequently appealed to. We are, I say, to strive after personal experience, not to rely on the experience of others, without which, indeed, no one can properly become a student of any branch of natural science. The method of investigating truth commonly pursued at this time, therefore, is to be held erroneous and almost foolish, in which so many enquire what others have said, and omit to ask whether the things be so or not.

These should be humbling words to those who regard medical science as a recent growth. Are they not as apposite today as they were then? Is there not some truth in the accusation that we practitioners of medicine have opposed art to science instead of building our art upon science?

I was never more convinced of the truth that our art is barren unless built upon scientific foundations than when listening to Dr. Castle build up the conception of pernicious anaemia as a deficiency disease. Here were resumed all the elements of the scientific method, the careful and laborious classification of facts, the comparison of their relationships and sequences, the remorseless criticism, and the foreseeing of every possible fallacy and the answer to it. Then finally the drama implicit in the story when, as Ruskin says, there comes the instinctive grasp of possible truth to the healthy imagination. It was as stimulating and exciting as a work of art.

My mind went back to the theories laboriously learned of the aetiology of pernicious anaemia, which led merely to stagnation, in particular of streptococci worming their way up from the lower bowel encouraged by the anacidity of the stomach. Karl Pearson (1892) once stated:

It is easy to replace ignorance by hypothesis, and because only the attainment of real knowledge can in many cases demonstrate the falseness of hypothesis, it has come about that many worthy and otherwise excellent persons assert an hypothesis to be true, because science has not yet, by positive knowledge, demonstrated its falsehood. Here, in the untilled part of the heritage of science, lies the playground of the undisciplined imagination.

What followed the discovery of the value of liver in the treatment of pernicious anaemia? From the proprietary drug houses came an avalanche of preparations, containing, in combination, iron, liver, malt, vitamins. The inference

is: "What matter now the cause and character of the anaemia, for here is a remedy which will satisfy all possibilities!"

If one speaks of hypothesis, is it not time to stop and question of what use the concept of allergy has been in the progress of medicine. The extension of this hypothesis bids fair to take on the appearances of a system such as the undisciplined imagination loves to play with. Its creator, von Pirquet, extended it to cover the tissue changes of senescence and those which lead to malignant growth. It sometimes takes on the character of a belief and has to be altered and modified, often in ingenious ways, to suit unforeseen circumstances and aberrations from the natural course of the disease in question. It has been used as the key to the understanding of the pathology and the symptomatology of bacterial infections on the one hand and of asthma on the other.

It was shown by Rich (1933) that allergy is a baneful process unnecessary in the development of immunity, and there was high hope that the pursuit of this idea might lead to the defeat of this influence by desensitization. Indeed, the greatest advance in the treatment of bacterial infection in that time has come from other directions. Is it not to be admitted, too, that the allergic hypothesis has failed in its ultimate object in asthma—the prevention and cure of the disease? Is the record of desensitization even comparable with that of adrenaline as a beneficent agent? Allergy is a powerful word in the world today, but it has begotten a feeble therapeutic agent.

Dr. John Locke, writing to a friend in the seventeenth century, might have penned these words on this very subject:

I perfectly agree with you concerning general theories—the curse of the time, and destructive not less of life than of science. They are for the most part a sort of waking dream, with which, when men have warmed their heads, they pass into unquestionable truths. This is beginning at the wrong end, men laying the foundation in their own fancies, and then suiting the phenomena of diseases, and the cure of them, to their fancies . . . I see it is more easy and more natural for men to build castles in the air than to survey well those that are on the ground. Nicely to observe the history of diseases in all their changes and circumstances, and wherein if men through prepossession or oscitancy mistake, they may be convinced of their error by unerring Nature and matter of fact.

In the general run of clinical work, according to Trotter, the conviction of a causal relationship between two events far exceeds the number of demonstrated and even of probable cases. No politician worthy of his seat would make a public utterance which did not include a warning against wishful thinking. Yet, in spite of this, who can resist the temptation of believing that the exhibition of a therapeutic agent has brought about a happy issue, even though no proof is possible?

What conditions must be satisfied before an inference is drawn that a particular remedy has produced a certain result? As Pearson has put it:

An inference which is scientifically valid is that which could be drawn by every logically trained normal mind if it were in possession of the conceptions upon which the inference has been based . . . The assumption which lies at the bottom of most popular fallacious inference is that the strongest argument in favour of the truth of a statement is the absence or impossibility of a demonstration of its falsehood.

One of the recent spectacular therapeutic resurrections is that of the camphor compounds. There is a widespread belief that they are life-saving in an emergency as cardiac stimulants, both direct and indirect, and even that they are valuable as "cardiac tonics" given by mouth over a period of time. In an elaborate book of over two hundred pages in praise of a trade preparation I searched for some scientific support for the exhibition of the camphor compounds as cardiac stimulants in the absence of peripheral circulatory failure. Here is what I found:

In view of the dependence of cardiac activity on the periphery it cannot be denied that . . . exerts an indirect action on the heart.

Can anyone satisfy the canons of scientific inference in saying that salicylates are of value in the prevention and treatment of rheumatic heart disease? It has been said that they influence the exudative and not the productive phase of what is an allergic disease. The drug has been in use for over forty years in a disease of which a good deal is known of the natural history, but little of the actual cause. Three patients may be ill with rheumatic fever and all may have salicylates in adequate doses; pain and fever are alleviated. None may have another attack; yet one dies from auricular fibrillation and congestive failure ten years later; the second may exhibit no abnormality; the third may pass through many pregnancies and be alive at the age of sixty years, with mitral stenosis and normal rhythm. It is impossible to deny that all might have died after ten years had it not been for salicylates; but this is a fallacious inference.

The fact is that salicylates are analgesics and antipyretic. It can be argued that salicylates are dangerous in rheumatic fever and rheumatic carditis. It is not uncommon to discharge children from hospital and continue salicylate treatment in the out-patient department. Examination of their blood may reveal a rapid sedimentation rate and a leucocytosis, while cessation of salicylate treatment will show that the temperature is still raised. So strong is the feeling that this drug masks the continued activity of the rheumatic infection that in some institutions in England and in America no child is allowed up until she has been afebrile, without salicylates, for a week.

How different is the situation when we come to consider the value of digitalis! It is open to each one of us to observe the effect of remedies in the cure or alleviation of chronic disease. In 1785 Withering published his little paper-covered book on the use of foxglove in the treatment of dropsy. In 1905 Mackenzie proved that digitalis achieved its best result when the dropsical patient had a rapid irregular heart action, and that it did so by lowering the ventricular rate. Having selected his patients, he put them to bed and kept them at rest until instrumental readings showed that the ventricular rate was constant. This period lasted about a week. Digitalis in doses of a drachm a day was then given and the reaction of the patient was observed from the ventricular rate and other manifestations. The reaction to digitalis would begin after five days and would be complete in eight to ten days. Lewis, in 1934, made the following statement:

The long preliminary rest was quite essential, since rest by itself usually resulted in a conspicuous fall of heart rate and betterment of the patient's state. Without the initial control period neither the onset nor the extent of the action of digitalis could be ascertained accurately. Speaking generally, a control period is necessary in providing a correct base line from which to measure an effect and to ensure that there shall be no confusion between the effect of the remedy tested and similar effects due to associated circumstances. It is remarkable how often in the latter respect precaution is overlooked. It is said of a man that he suffered in his daily work from severe and repeated attacks of *angina pectoris*; that he was put to bed in hospital, and sympathetic ganglia excised and nitroglycerine given, and that from that time until he was discharged weeks or months later his attacks disappeared. Statements of this kind are valueless as evidence of the potency of the specific remedy employed.

Have we practitioners applied these golden rules in gaining our ideas of the value of digitalis as a remedy, and of when we should use it, and in what dosage? My own impression is that it is used too frequently and in too great amount. I was always impressed by the rarity with which it was necessary rapidly to give patients digitalis in the National Heart Hospital. I remember Dressler, the Viennese cardiologist, coming to the hospital and saying that he would place morphine first as the most valuable drug in heart disease.

It is, I think, a justifiable experiment, which I often tried when confronted with a distressed patient with a rapidly fibrillating heart, to give her a quarter of a grain of morphine and leave her at rest. During this period the heart and pulse rates were recorded. After some hours I frequently found that smaller doses of digitalis were adequate than would have appeared necessary had the remedy been prescribed earlier. After the rapid adminis-

tration of digitalis there comes a period when the further dosage becomes a matter of conjecture.

I do not think that digitalis is useless when the rhythm of the heart is normal; but I am doubtful of its value in hypertensive heart disease and coronary arteriosclerosis when the rhythm is normal and slow. I take it to be a matter of grave prognostic significance if a heart is fibrillating slowly under the influence of digitalis and oedema is still present. Digitalis can produce no further beneficial action. Indeed, it is worth considering the possibility that digitalis has embarrassed the heart. If the drug is interdicted the heart rate may rise and the output of urine increase. If diuretics do not keep the output of fluid at a higher level than the intake, then we are indeed at the end of our resources.

The methods which can be employed to establish the value of digitalis might often be used with advantage with the new and powerful remedies of the sulphanilamide group. Curiously, the name sulphanilamide was coined in 1937 by Dr. Fuller, and in 1642 Dr. Fuller, a divine, wrote:

The good physician hansels not his new experiments on the bodies of his patients, letting loose mad receipts into the sick man's body to try how they and nature will fight it out, while he stands by and enjoys the battle, except in desperate cases.

A duty is imposed upon everyone who uses these drugs to endeavour to further the knowledge of their spheres of usefulness and of their limitations. How can this be effected when no attempt is made to establish a diagnosis and there are therefore no grounds for inferring that recovery is due to the remedy? They are used for pyrexia when not the slightest attempt has been made to discover the origin of the fever. They are in common use in conditions vaguely diagnosed as "streptococcal" without any endeavour being made to ascertain the truth.

Great caution and a proper humility are necessary in accepting the patient's word as to the result of treatment. It should be the aim constantly to be on the watch for objective phenomena by which to judge the results of treatment. There come to mind temperature charts and differential leucocyte counts in fevers.

In some chronic disease it is possible to repeat the administration of a remedy at uniform intervals, and in this way much information can be accumulated about its effectiveness when the patients available for observation and experiment are comparatively few. It is thus that the majority of doctors have assured themselves of the value of mercurial diuretics for the relief of the oedema of congestive heart failure. It is perhaps not so commonly recognized that they are of value for cardiac dyspnoea when no obvious oedema is present. It can be shown objectively in the following way:

The patient is weighed accurately and the daily intake of fluid and output of urine are measured. An injection of a mercurial diuretic is then given, and if the response is satisfactory, the weight and the rate of breathing will fall. As the days go on, the output of urine will decrease, fluid will accumulate in the deep tissues, and weight and the rate of breathing will increase. It may be two weeks before the patient reverts to the state in which he was prior to the injection. A further injection will be followed by the same result, and it is possible in this way to keep a patient in comparative comfort for many months or even years.

For these and other blessings we have to thank the proprietary drug houses. To offset these they have encouraged the irrational use, singly or in combination, of a host of substances. They have peacefully penetrated our brains until we scarcely bother to think beyond the confines of their beautifully produced journals, their travellers and their samples. Amazement is the dominant sensation roused by travellers who seek an interview—amazement at their superb confidence and their flow of pseudo-scientific jargon backed up by a letter or abstract, the essence of which is generally: "I have used this preparation in an inadequate number of cases, without any control, and most of the patients got better." (Trevan, 1938.)

Trevan has also made the following statement:

In the practice of an art of any kind, traditional procedures and procedures based on vague personal beliefs are always in use, but the constant endeavour of all modern

arts and crafts is to substitute an accurate scientific control for tradition and vague opinion. Do what you do with your eyes open, be clear in your own mind when you are acting on established fact, and when, *faute de mieux*, using some scientifically unjustifiable method.

Is there a fresh scientific viewpoint which takes cognizance of the peculiar problems of our day and seeks to foster the application of the scientific habit of mind to the practice of medicine? So often the answer seems to suggest that this desirable aim can come only through specialism. With distressing frequency there follows a laudatory reference to team work. How often does a barren discussion terminate to the mutual satisfaction of the participants with the conclusion that the problem will be found to demand the closest cooperation between the physician, surgeon, radiologist, pathologist and perhaps others, so that every canal may be explored and no stone left unturned?

Can this really be so? Is it not the distinguishing feature of the great specialist that he is equipped at all points in his own field? The specialist in neuro-surgery, for example, must be a neurologist, a pathologist, and a radiologist in his own field, and be trained in psychological medicine. The background for this should be a wide knowledge of general medicine. What of the example of tropical medicine? What quiet successes have been won in this field by workers versed not only in the clinical aspects, but with a wide knowledge of that special work (helminthology, protozoology, bacteriology, entomology) which is pertinent to the problem!

Thoracic surgery, and particularly the field of pulmonary tuberculosis, has suffered because of the exuberant claims of surgeons who have neither the time nor the patience to become aware of the natural history of the diseases which they are treating. The surgical wards even of a chest hospital are not the places to learn this. It is difficult to see how this special training can be acquired in less than two years—six months as house physician and twelve months as house surgeon at a chest hospital, followed by six months at a sanatorium.

Does it not seem that the line drawn between the medical and surgical aspects of chronic diseases of some systems is a false one? Can any cardiologist versed in the natural history of coronary artery disease share the enthusiasm of the surgeon who sees a new field in operations designed to give such affected hearts a new blood supply?

And what of this discrepancy between our surgical and medical *confrères* in reference to the treatment of haematemesis from ulcer? Gordon-Taylor (1935), in a plea for surgical measures, made the following statement:

"Finsterer's first forty-eight hours is still the optimum period for surgical attack in haematemesis, and the golden age of gastric surgery will have been attained only when all cases of haemorrhage from chronic ulcer come to operation within that space of time."

Now Finsterer has shown in a series of 59 cases a mortality rate of 5% with operation in the first forty-eight hours, while Meulengracht, in a much larger series, comprising 250 cases, in which his diet and medical treatment were employed, has a mortality rate of 1%.

Witts (1937) stated that he had decided not to permit operation on any patient under his care for bleeding from the stomach or duodenum, even though the bleeding was severe and recurrent.

It seems not quite the best result of intensive specialism that one specialist may decree operation within forty-eight hours and another no operation at any time. Ten years ago I listened to a surgeon describing his physiological reasons for performing the operation of gastro-enterostomy. Recently he explained to me his physiological reasons for undoing a great number of them. Perhaps there is solace to the specialist, if not to the patient, in the knowledge which those ten years have brought.

It is a commonplace that the observational method has exhausted its usefulness and that the progress of medicine will depend upon experiment and instruments of precision. Let those condemned to practise largely the former method take heart and fresh stimulus from the report of the Peckham Health Centre: "Biologists in Search of Material".

The material that Williamson and Pearse sought was the organism man in health, in an environment not conditioned by the doctor's consulting room or the hospital. They conceived the idea that health was not merely the opposite to disease, but an active state. They discovered that the sense of well-being has nothing to do with health, but is the measure of the effectiveness of the process of compensation in the body. The most exuberant sense of well-being may be associated with the most serious disorder, and well-being completely discounts for the individual the importance of any manifest disorder. The truth of these statements will be recognized by all practitioners. The opportunity of studying disorders before they cause disease has brought forth this stimulating report.

What has its title to do with the substance of this paper? The *Timaeus* can hardly be considered as one of the greatest of Plato's dialogues; yet one cannot read even the sentences quoted at the beginning of this paper without realizing that to Plato the mind was the citadel of reason. It is for this stronghold that this paper is intended as a plea—for the scientific outlook harnessed to a disciplined imagination.

Faraday once said that he always doubted his results. How humbling when we can be so sure! Yet the prevalence of doubt and criticism is one of the safeguards of scientific progress.

No person, however famous, has the right to stamp his personal beliefs with the hall-mark of scientific truth if they do not obey the canons of scientific inference. The remembrance of this may save us from the influence of many a fallacy printed under a famous name. How, then, in this spate of scientific journals, and amid this glut of proprietary remedies (when it sometimes appears that the best physician is he who has the greatest number at his finger tips), are we to maintain some standard of intellectual honesty?

All professional men labour under a great disadvantage in not being allowed to be ignorant of what is useless; everyone fancies that he is bound to receive and transmit whatever is believed to have been known. A memory may in itself be even too retentive for practical utility. A certain degree of oblivion becomes a most useful instrument in the advancement of human knowledge.

How true this is today! But it was written nearly one hundred years ago.

But perhaps the answer to my question was written two thousand years ago and is implicit in the lives of those whose words I have so freely quoted.

For a man's own soul is sometime wont to bring him tidings, more than seven watchmen that sit on high on a watchtower.

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THE VALUE OF PRE-OPERATIVE ESTIMATIONS OF THE SERUM PROTEIN CONCENTRATION IN GASTRIC SURGERY.

By JOHN DEVINE, M.S.,
Melbourne.

RECENT experimental work on animals would appear to throw a new light on the relation of the concentration of serum proteins to operative risks in gastric surgery. This work shows that the serum protein concentration influences the rate of emptying of the stomach;¹ the lower the concentration of proteins, the slower the emptying time. It also shows that a low serum protein concentration is

found associated with a slowing of the rate of passage of contents through the small bowel.⁽²⁾

In laboratory animals on which operations on the gastro-intestinal tract have been performed, if the serum protein concentration is low, definite changes can be radiologically demonstrated in the stoma; and when the serum proteins are raised to normal levels these changes can be seen to disappear.⁽³⁾

In view of this experimental work it would be reasonable to assume that a patient with a lowered serum protein concentration may be a "poor operative risk" and that this lowering may be a factor in those cases in which after gastric operations complications (acute dilatation of the stomach, intestinal ileus) arise as a result of alteration in the motility of the gastro-intestinal tract or follow haemorrhage or leakage from the suture line due to alterations in or to poor healing of the stoma.

It is therefore not unreasonable to suggest that the serum protein concentration of patients who are about to undergo a gastric or intestinal operation should as a routine measure be examined, and that if this concentration is found to be low, steps should be taken to raise it.

In the following paper an attempt is made to assess the value of such a routine test and to show the influence of diet, both immediate and remote, on the concentration of the serum protein.

Material.

The material investigated comprised 26 patients, not selected, 15 being from among those operated upon at the Royal Melbourne Hospital in the last two years for gastric or duodenal lesions.

The following are the particulars which have been tabulated:

Age.
Occupation.
Sex.

Duration of symptoms.

Timing of pain.

Method of gaining relief from pain.

Indications for operation.

Pre-operative treatment.

Type of operation performed.

Post-operative complications and treatment.

Serum protein concentration (total protein, globulin, albumin).

Diet:

Average daily protein intake before the commencement of symptoms.

Average length of time any special diet was taken.

Average daily protein intake after commencement of symptoms.

Foods preferred and foods avoided.

In addition, control investigations on normal persons were carried out. For the estimation of what (in the locality in which the investigations were being made) might be called an average serum protein concentration in healthy people, single estimations were performed on six healthy blood transfusion service donors. In order, too, to determine the daily variations of serum protein concentration in healthy people receiving their usual diet, four normal persons (two were resident medical officers performing their daily duties at the Royal Melbourne Hospital) were observed by the taking of estimations of the serum protein concentration; the estimations were in general made every four hours.

Further, to ascertain the effect on the serum concentration of a diet rich in protein, three of these persons were given meals with high protein content and the effect on their concentration of the serum proteins was noted.

Results of Investigations on Patients.

Examination of Table I shows that, in the number of cases listed, there is apparently no proof of a relation between the total serum protein concentration and post-operative complications, nor between the serum globulin concentration and these complications; but there is suggestive statistical evidence that there is a relation between the serum albumin concentration and the occurrence of post-operative complications. The chances that this is a coincidence are about 1 in 20.

TABLE I.
General Results of the Investigation.

Case.	Age in Years.	Sex.	Serum.			Average Pre-operative Diet.		Operations.	Complications.
			Albumin. (Per- centage.)	Globulin. (Per- centage.)	Total. (Per- centage.)	First Class Protein. (Grammes for One Day.)	Second Class Protein. (Grammes for One Day.)		
I. (J.H.)	67	M.	4.29	3.47	7.76	53.0	46.0	Gastro-enterostomy.	Acute dilatation of stomach.
II. (J.McN.)	41	M.	—	—	—	76.0	48.5	Gastrectomy and exclusion.	Acute dilatation of stomach.
III. (R.R.)	45	M.	4.0	—	6.0	68.0	28.0	Oversewing of ulcer and gastro-enterostomy.	Acute dilatation of stomach. Bronchopneumonia.
IV. (J.N.)	34	M.	4.46	2.04	6.50	45.0	53.0	Partial gastrectomy. Gastric exclusion.	Hæmorrhage.
V. (C.H.)	34	M.	—	—	6.91	43.0	43.0	Gastro-enterostomy.	Acute dilatation of stomach. Bronchopneumonia.
VI. (W.H.)	58	M.	1.78	3.06	4.84	15.5	33.5	Partial gastrectomy.	Acute dilatation of stomach. Vomiting of blood.
VII. (J.S.)	59	M.	2.30	5.26	7.66	—	—	Partial gastrectomy.	Acute dilatation of stomach. Acute dilatation of stomach. Bronchopneumonia.
VIII. (S.M.)	61	M.	—	—	—	40.0	24.0	Partial gastrectomy.	Partial gastrectomy. Exploratory.
IX. (O.D.)	34	M.	—	—	—	54.0	12.0	Oversewing of ulcer.	Acute dilatation of stomach.
X. (W.L.)	46	M.	2.15	4.01	6.16	60.0	25.0	Partial gastrectomy.	Distension. Poor healing of wound. Hæmorrhage.
XI. (G.N.)	41	F.	6.4	2.3	8.7	47.0	11.0	Partial gastrectomy.	A little haemorrhage into bowel.
XII. (G.C.)	35	M.	5.62	5.63	11.25	42.5	30.5	Closure of perforation.	Pneumonia. Wound infection.
XIII. (J.H.)	44	M.	5.30	0.95	6.56	57.5	24.5	Partial gastrectomy.	Dilatation of stomach. Pneumonia.
XIV. (W.C.)	52	M.	4.10	2.15	6.25	43.0	35.5	Gastro-enterostomy.	Death.
XV. (C.R.)	63	M.	3.75	2.40	6.55	—	—	Gastro-enterostomy.	
XVI. (T.B.)	66	M.	6.09	1.12	7.21	40.5	35.0	No operation performed.	
XVII. (E.P.)	69	M.	—	—	—	88.0	16.0	No operation performed.	
XVIII. (J.B.)	42	M.	3.56	3.71	7.27	36.5	50.59	No operation performed.	
XIX. (R.R.)	64	M.	—	—	6.70	18.0	14.5	No operation performed.	
XX. (F.D.)	57	F.	2.41	2.97	5.38	56.0	22.0	No operation performed.	
XXI. (W.M.)	36	M.	1.89	3.70	5.59	30.0	10.0	No operation performed.	
XXII. (F.McC.)	46	M.	3.82	2.73	6.55	44.0	50.0	No operation performed.	
XXIII. (G.M.)	56	M.	7.2	2.8	10.0	27.0	21.5	No operation performed.	
XXIV. (J.P.)	48	M.	3.5	6.4	9.9	41.5	19.0	No operation performed.	
XXV. (P.D.)	60	M.	—	—	—	67.0	54.0	No operation performed.	
XXVI. (Young.)	—	—	—	—	—	98.0	49.0	No operation performed.	

In these results, within the extent of the variations found, there is no proof that a relation exists between the average protein intake in the diet and the total serum protein concentration. In Case VI, however, in which a diet excessively low in protein had been taken, the serum protein concentration was notably low, and this seems to show that there is a threshold of the amount of protein in the diet of every patient below which lowering of the concentration of the serum protein can be brought about.

In these results there is no proof (but there is suggestive evidence to the contrary) that within the usual limits of variation of the protein intake in diet there is any relation between the average pre-operative daily intake of protein and the occurrence or otherwise of complications following gastric operations. There is, too, similar lack of evidence of any relation when an endeavour is made to establish a relation between first-class or second-class protein in the pre-operative diet and the serum protein concentration in post-operative complications.

A study of these results also shows that after the onset of the symptoms of post-operative complications patients avoided red meat, fresh fruits, spices, coarse vegetables, fatty foods and sweets, and instead of these took white meats, eggs, milk and milk puddings, cakes and soft vegetables.

Serum Protein Estimations in Normal Persons.

Table II shows the results of serum protein estimations made on healthy normal Red Cross blood transfusion donors, from whom blood was taken about eight o'clock in the evening. The average of these six readings is 6.92%.

TABLE II.

The Serum Protein Concentrations in Six Red Cross Donors, the Blood for Estimation being taken at 8 p.m. The Average Total Protein Concentration was 6.92%.

Number of Donor.	Albumin. (Percentage.)	Globulin. (Percentage.)	Total Protein. (Percentage.)
1	2.60	4.93	7.81
2	2.62	5.31	8.27
3	2.75	4.30	7.39
4	3.89	2.32	6.43
5	3.62	2.18	6.06
6	3.41	2.21	5.79

Daily Variations in the Serum Protein Concentration in Normal Subjects.

Four normal subjects were investigated in order to determine whether there were pronounced daily variations in the serum protein concentrations. Readings of the protein concentrations were taken nearly every four hours for from twenty-four to forty-eight hours. In each case the subject was examined first when taking his usual diet; and then three of the subjects were examined after a meal rich in protein had been administered. In all cases the effect on the serum protein concentration was investigated, and the results are depicted graphically in Figures I, II, III and IV.

It will be seen in the above graphs (Figures I, II, III and IV) that there is a wide daily swing in the serum protein concentration in all the subjects except "J.F." (Figure IV), who had been taking frequent small amounts of protein ("egg flips" every four hours). It will also be noticed that this subject is the only one to show what is described as the usual ratio of albumin to globulin; all the other subjects had the ratio reversed.

In Figures I, II and III it will be seen that a meal rich in protein has a distinct effect on the serum protein concentration; there is, within four hours, a rise of as much as 2.75% in the total protein content, and this rise appears to continue for eighteen hours. These three cases would also seem to show that there is a rise in serum protein concentration of about 2% for every meal of a hundred grammes of protein.

Discussion of Results.

Although the number of cases in this series is too small to allow definite conclusions to be drawn, some suggestive information is obtained.

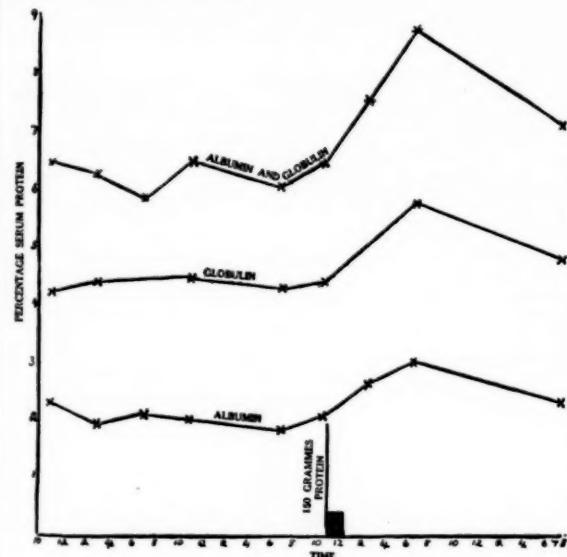


FIGURE I.

Mr. C. The subject was given a meal containing 150 grammes of protein at 11 a.m., as shown on the graph, and the rise in total protein concentration was 2.3% in six hours.

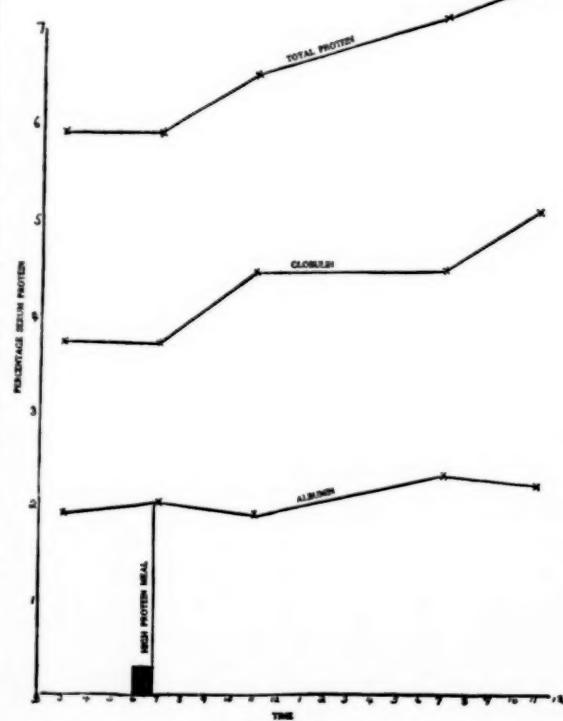


FIGURE II.

Dr. J.B.D. Following a high protein meal there was a slow rise in the serum protein concentration of 1.64%.

First, as regards post-operative complications, a scrutiny of the results obtained would seem to show that there does exist a relation between the occurrence of post-operative complications and a low serum albumin fraction. There is, however, no proof that any relation exists between the occurrence of post-operative complications and the

steady for some time before falling and that there are substantial reserve stores of plasma protein building materials.¹⁰ It may be that in the series of cases under review the deficiency in protein noted in some of the diets may not have been sufficiently severe to cause appreciable lowering of the serum protein level.

Lastly, with regard to the daily variations in the serum protein concentration, it would seem necessary always to make the estimation after the patient has been fasting for twenty-four hours, because of the large daily variations noted in the plasma protein levels. (In one case the swing was as much as 2·75% following a meal high in protein.)

It is possible, therefore, that it is an advantage to the patient who is about to undergo a gastric operation to have a high serum protein concentration. If this is true, then an investigation of the methods which might be used to raise the serum protein level is necessary; for, in the series of cases here reported, a long-continued high-protein diet does not appear to have made any appreciable difference, although a single meal rich in protein appears to cause a transient rise in the level of protein. The most effective method of causing a rise in the level of protein concentration therefore appears to be the administration of a single meal rich in protein. Moreover, transfusions of a pint of serum will usually raise the protein level of the plasma only by about 0·3% to 0·6%.

Conclusions.

1. There is probably very little or no relation between the serum protein concentration and the protein in the diet within the usual variations of diet.

2. There is a wide daily swing in the serum protein concentration.

3. A single meal rich in protein raises the serum protein concentration for at least four hours.

4. As there is a probable relation between the serum albumin level and post-operative complications in gastric surgery, and as the serum albumin level may be raised by a meal rich in protein or a transfusion of serum, it may be of use in some cases to estimate the serum albumin content before critical gastric operations. When these estimations are made they are of value only if all the estimations are made at the same time of day, after the same diet, and after the patient has been fasting for twenty-four hours.

Acknowledgements.

My thanks are due to Miss South and Miss Splatt, of the Royal Melbourne Hospital, for the arduous biochemical work involved, and to Miss Garland and Miss Clegg, of the dietetic department of the Royal Melbourne Hospital, for the time-consuming dietary investigations. The investigation was performed while I was a senior surgical resident medical officer at the Royal Melbourne Hospital, and my thanks are due to the honorary staff of the Royal Melbourne Hospital, in whose care were the patients investigated, for permission to make this report.

The statistical work was by Dr. G. Reid.

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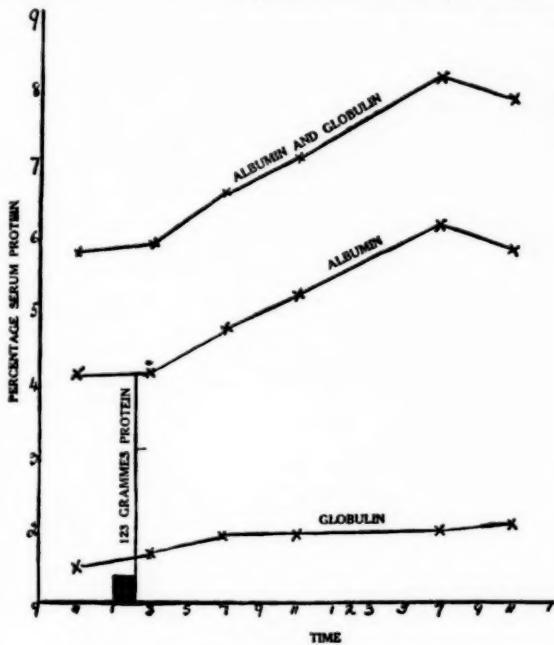


FIGURE III.

Mr. R.S. A meal of 123 grammes of first-class protein was followed by a rise in the serum protein concentration of 2·3% in twenty-four hours.

total protein concentration or serum globulin fraction. For practical clinical purposes, therefore, total protein estimations before operation would seem to have little value.

Secondly, as regards the effect of diet on the serum protein concentration, no relation could be proved to exist between the first-class or second-class protein in the diet

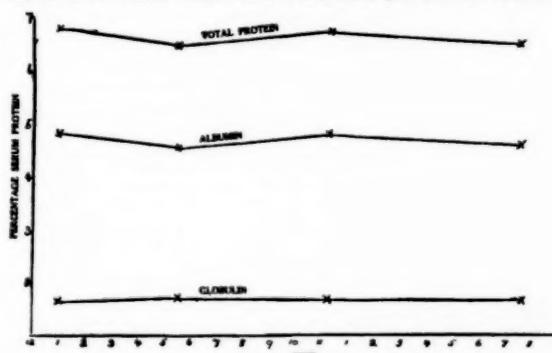


FIGURE IV.

Dr. J.F. The subject was taking "egg flips" every four hours and the daily variation in the serum protein concentrations was small.

and the serum albumin, serum globulin or total protein content, notwithstanding the fact that it has been shown that in laboratory animals¹⁰ a diet low in protein will lead to a progressive decrease in the concentration of the serum proteins. In laboratory animals¹⁰ it has been noticed that the serum protein concentration remains

Reviews.

THE HUMAN VOICE.

ROBERT CURRY is a master of arts and doctor of philosophy, but not a medical man. He has written a small work entitled "The Mechanism of the Human Voice".¹ The physiology and mechanics of breathing are well described, along with an outline of the anatomy of the vocal organs, especially the musculature. There is a useful condensed description of the action of the vocal cords and accessory musculature in the production of the several registers of the human voice. Later chapters deal with the singing voice, the association of the voice with hearing, and finally, a description of some of the disorders of voice and speech from the physiological and psychological points of view. Although there is a short foreword by a well-known laryngologist, Dr. Douglas Guthrie, of Edinburgh, nevertheless, like other works of its kind which have recently been produced by physicists, the work lacks true utility from a medical point of view, in that it does not proceed to a description by the laryngologist of vocal disorders as encountered in medical practice. Neither is there any useful description of the methods employed either by the laryngologist or by the teacher of voice production and reeducation in handling the patient with disorders of voice and speech. The inclusion of sections dealing with this practical side of vocal and speech disorders would be very welcome in future editions of works of this kind. At the end of the book there is an excellent series of references to the enormous volume of writings which the author has consulted. The Index is unusual in that, instead of the usual references to pages in the text, figures are given that have reference to the chapters and sections of the book, which are numbered throughout.

NEUROLOGY.

WHEN it became known that S. A. K. Wilson was at work upon a book on neurology it was anticipated that it would be an outstanding achievement. Since the appearance of Gowers's "Manual of Diseases of the Nervous System" half a century ago there has been nothing comparable of British origin. Wilson has now given us a work planned on generous lines, in which the clinical aspects of disease of the nervous system are handled with monographic detail.² In comparison with other large works, relatively less space is devoted to purely anatomical and physiological considerations; for example, disorders of speech are dealt with according to the clinical conditions in which they occur; there is no reference to the work of Head in this connexion. Pathology, including the bacteriology of diseases of the nervous system, is discussed in considerable detail. Historical notes abound in the text, and etymological errors of nomenclature have not escaped the critical comments of Wilson's scholarly mind.

Volume I deals with toxic and infectious diseases of the nervous system, including those due to industrial poisons, snake venoms and drug addiction. The chapter on disseminated sclerosis appropriately follows that on disseminated encephalomyelitis. The section on cerebro-spinal fever was evidently completed before the effect of the newer drugs had been substantiated. There is a magnificent chapter on neurosyphilis, in which the mode of infection of the nervous system and the question of neurotropic and dermatotropic strains of spirochaete are discussed at length. The description of personality changes in general paralysis is lively and full of psychiatric understanding. Wilson mentions the case of a psychiatrist, an expert on the histology of the disease, who completely lacked insight into the nature of his malady when he developed general paralysis. Syphilitic psychoneuroses and psychoses also receive attention. Landry's syndrome is described as a group of ascending paralyses with varying pathology and nerve and cord involvement.

¹ "The Mechanism of the Human Voice", by R. Curry, M.A., Ph.D., with a foreword by D. Guthrie, M.D., F.R.C.S., F.R.S.; 1940. London: J. and A. Churchill Limited. Demy 8vo, pp. 214, with illustrations. Price: 10s. 6d. net.

² "Neurology", by S. A. Kinnier Wilson, M.A., M.D., D.Sc., F.R.C.P., edited by A. N. Bruce, F.R.C.P., D.Sc., M.D., F.R.S.; in two volumes, 1940. London: Edward Arnold and Company. Super royal 8vo, pp. 1838, with illustrations. Price: 84s. net.

The second volume contains sections on degenerative disorders, metabolic and deficiency states, congenital anomalies and disease conditions of uncertain origin, amongst which are included epilepsies, narcolepsies, family periodic paralysis, migraine, *myasthenia gravis* and tetany. Vascular disease and tumours of the nervous system are also dealt with in this volume. Part X deals with motor, sensory and reflex neuroses, and opens with a critical discussion on terminology and on the delimitation of syndromes which "present varying pictures of physiological disability not as yet linked, and perhaps never to be linked, with lesions that the microscope can disclose". Wilson urges that a distinction be preserved between the terms "neurosis" and "psychoneurosis", admitting that his classification is essentially symptomatic, with causation left aside "owing to its obscurity". It is interesting to note that Wilson affirms the existence of the somewhat discredited Gilles de la Tourette's disease. The different aetiologies of torticollis are reviewed in detail. Occupation neuroses and miners' nystagmus are dealt with in separate chapters. Under "reflex neuroses" are included functional disorders of micturition and defecation, for which a commonsense psychotherapy is advised, together with drugs. In the treatment of enuresis "from beginning to end appeal must be made to the conscious mind".

Wilson's unique experience, his critical faculty, his profound knowledge, his apt phraseology and the occasional lighter touches have all contributed to the production of an outstanding work representing the best traditions of English neurology, and one which is likely to remain for a long time unrivalled. The 1,700 pages of text are followed by an index of some 6,000 authors, where may be found the names of many members of the medical profession in Australia. There are references to more than 300 journals. Most of the 16 plates are devoted to clear reproductions of photomicrographs, and the 300 or more pictures in the text are equally well printed from photographs which have evidently been taken and selected with the greatest care. Before his death in 1937 Wilson had completed the greater part of this work; it was thereupon edited by A. Ninian Bruce, who has preserved most ably the form and spirit and has been responsible for bringing the list of references up to date.

The publishers are to be congratulated on the part they have played in the production of these memorable volumes.

HUMAN HISTOLOGY.

TEACHERS of histology and authors of histological textbooks have too often been contented to illustrate their lectures with material taken from mammalian non-human tissues. One of the great merits of Dr. Cooper's text-book is implicit in its name "Human Histology".¹ To quote the foreword by Professor Wood Jones: "The descriptive text is amply supplemented by illustrations, the vast majority of which are of human material and are actual photomicrographs of typical specimens. The student should regard Dr. Cooper's text-book not only as a manual of human histology that will enable him to become familiar with the subject and so ensure the passing of examinations, but as a companion to his text-book of pathology when examinations in normal histology are done." Dr. Cooper has been for many years lecturer in histology at the University of Manchester, where Professor Wood Jones occupies the chair of anatomy. His experience in teaching is shown in the practical sections appended to each chapter. These are exhaustive and very well set out. The opening chapter, entitled "The Microscope", defines clearly the methods of observation to be used and degrees of magnification to be obtained, thus forming an excellent basis for succeeding descriptions. So much for the credit side. As to the debit, we may perhaps criticize Dr. Cooper's reliance on photomicrographs, not always well reproduced. The use of diagrams in addition would be helpful, and colour photography would be of great advantage in a book of this kind. The style of the descriptions often leaves much to be desired; the phrases are often awkward, the definitions unnecessarily elementary. Such sentences as "The erythrocytes are the most numerous of all blood corpuscles" or "In early embryonic life the liver and spleen originate" are surely out of place in a text-book intended not only for medical students, but for senior students and graduates.

¹ "Human Histology: A Guide for Medical Students", by E. R. A. Cooper, M.D., M.Sc., with a foreword by F. Wood Jones, F.R.S., F.R.C.S.; 1939. London: H. K. Lewis and Company Limited. Demy 8vo, pp. 438, with 287 illustrations. Price: 16s. net.

The Medical Journal of Australia

SATURDAY, SEPTEMBER 7, 1940.

All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given without abbreviation: Initials of author, surname of author, full title of article, name of journal, volume, full date (month, day and year), number of the first page of the article. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

THE REMOVAL OF TONSILS AND ADENOIDS FROM CHILDREN.

Few questions are more likely to give rise to argument than those connected with the removal of tonsils and adenoids. Anyone who doubts the truth of this statement has but to turn back over the files of this journal to have his doubts settled. Differences of opinion have been expressed chiefly about the type of operation that should be practised and about such questions as focal sepsis; wordy battles have been long drawn out, and such captions as "Shall the Tonsil be our Totem?" have delighted the eye of non-participants. Though the subject is important, since nearly every medical practitioner regards himself as capable of performing the operations of tonsillectomy and adenoidectomy, it might be supposed that the ground had been so well traversed that there was little reason to bring it into prominence again. This would not be correct. Any abnormal condition which is common, and any surgical procedure designed to correct it, particularly if widely practised and regarded as simple in performance, should be reviewed from time to time, lest essential facts be forgotten or distorted, judgement fail and patients be improperly treated. A review of the indications for removal of tonsils and adenoids from children is opportune in the light of a recent discussion by the Section of Laryngology of the Royal Society of Medicine.¹

In any reference to indications for the surgical removal of tonsils it is necessary to think first of all of their function and their structure. Though many older children and adults seem to thrive without tonsils, it is probably correct to attribute to them some function in the development of immunity, particularly in early childhood. This point was stressed in the recent discussion by J. D. Kershaw, who stated that until knowledge on this point was materially increased, operation was contraindicated during the stage of the child's physiological response to its environment. The structure of the tonsils makes them potentially dangerous, for in their inner recesses micro-

organisms may lie dormant and either give rise to chronic infective conditions or spring into sudden activity and cause an acute inflammatory process. Adenoids act in a mechanical fashion by obstructing normal respiration. An enlarged tonsil is not necessarily septic, and enlargement *per se* is not an indication for operation unless it is causing symptoms. Likewise all mouth breathing is not due to large adenoids. T. S. Rodgers, at the Royal Society of Medicine discussion, referred to an investigation of 111 mouth breathers, in only 17 of whom the condition was due to adenoids. Many children, as Josephine Collier declared, need breathing exercises rather than a nasal operation. The chief problem is to establish a relationship between the state of the tonsils and adenoids and the symptoms or disease from which the patient is suffering. Perhaps too much emphasis cannot be laid on the statement that removal of adenoids is useless if nasal obstruction is due to enlargement of the turbinates or if nasal discharge is present; both these may be due to sinus disease. Josephine Collier is right when she states that the absence of sinus infection should be established before any operation on the tonsils or adenoids is undertaken. It is not always easy to determine whether a tonsil is septic or not. S. D. Elliott, in *The Lancet* of September 9, 1939, reported that 60% of patients admitted to hospital for tonsillectomy carried *Streptococcus hemolyticus* in the throat. On the other hand, other workers have found that the bacterial flora on the tonsillar surface does not give a true indication of the flora of the crypts. Among these are W. C. Sawers and F. R. Barrett, who reported an investigation in this journal in 1933. These observers found that in the cases investigated by them *Streptococcus hemolyticus* was the predominating organism cultivated from the crypts. In the difficult matter of deciding whether a tonsil is septic, L. Barrington-Ward holds that more can be learned by study of the secondary effects of tonsillar infection than from the appearance of the tonsils or from bacteriological investigation which "is not always helpful". He refers *inter alia* to repeated tonsillitis and to the effects of chronic sepsis. In regard to the first of these, it has been claimed that a complete change of climate will work wonders, but even those who make this claim will admit that the apparent cure may not be permanent and that a return to the former environment often results in a recrudescence of the original trouble. There can be no doubt that a properly performed tonsillectomy is a sure way of putting a stop to the attacks and that recurrent tonsillitis will remain the chief justification for operative interference. In regard to the effects of chronic sepsis, T. S. Rodgers is probably right in his contention that the idea of focal sepsis is much less widely held than it used to be. This does not imply that there is no such thing; but we would insist that there are no adequate grounds for the contention of those who would attribute to a focal sepsis almost every physical and mental ailment that affects a suffering humanity. We cannot refrain from recommending to the earnest attention of these enthusiasts a leading article on focal sepsis published in *The Lancet* of April 13, 1940. That the organisms in the crypts of infected tonsils are a menace to the patient is shown in an interesting observation by S. D. Elliott, to whose paper reference has already been made. Elliott took samples of blood from 100 patients within a few minutes of tonsillectomy and incubated them in suitable media. In

¹ Proceedings of the Royal Society of Medicine, April, 1940.

38 instances he obtained a culture of septic organisms. In 13 of the 38 instances he took another sample of blood a few hours later and found that every one was sterile. In every instance there was an interval of six weeks between acute infection and operation. Josephine Collier undoubtedly spoke the truth when she said that the general practitioner and children's physician who sent for tonsillectomy only those children to whose illness they had given careful consideration, would be more likely to see good results from operation than would a medical statistician examining the records of children many of whom had undergone operation because a doctor on routine examination had declared that the tonsils were enlarged. It is for this reason no doubt that school medical officers in this country refer to their own medical attendants children whom they find with unhealthy looking tonsils.

Since we are chiefly concerned at the moment with indications for operation, we do not propose to discuss the type of operation that should be performed. It must suffice to state that removal of tonsils must be complete and that it should be effected with the smallest possible amount of damage to the neighbouring structures. Elliott's observations also show that there should be an appreciable interval between an attack of acute tonsillitis and operation. And another point that must be mentioned is one that is often forgotten—the duty of the medical practitioner does not cease when he has operated on the patient; he must see that recovery is complete and, above all, that mouth breathing is abolished. If this practice was adopted much of the dissatisfaction following operations on tonsils and adenoids would be avoided.

In the foregoing the impossible task of laying down rules or of stating all the indications for the removal of tonsils and adenoids has not been attempted. The chief considerations that should be borne in mind in the making of a decision have, however, been mentioned. This must suffice. In this, as in so many other matters, experience and judgement are necessary. It is so easy to insist on removal of tonsils and adenoids, and thus to create the impression that there is a fashion in these matters, that there is constant need for the practitioner to be on his guard and to take stock of his diagnostic ability and of his motives. In the London discussion Josephine Collier spoke of signs that the pendulum was swinging from routine tonsillectomy to routine treatment of supposed nasal sinus disease. She added that "children with frequent colds and recurrent bronchitis are subjected to nasal medication with, or without, antrum drainage, sometimes with less justification than the former wholesale removal of tonsils and adenoids". That such a state of affairs is even considered possible is a reflection on the care, if not on the probity, of medical practitioners. Every practitioner cannot be an expert rhino-laryngologist; but every practitioner can take the same care with his patients as he would demand for his own children.

Current Comment.

HÄMORRHAGIC DISEASE OF THE NEW-BORN.

HÄMORRHAGIC disease of the new-born is characterized by the spontaneous appearance of bleeding, usually from the alimentary tract, in a baby during the first week

of life. Trauma is never a factor in the production of this bleeding. An excessive deficiency of prothrombin in the infant's blood has been repeatedly found and is thought to be the cause of the haemorrhage. The blood of the normal new-born has a low prothrombin level, the amount present being approximately one-fourth of that found in the normal adult per unit volume of blood. This is a matter of little moment, however, for normal adult blood contains over one hundred times the amount of prothrombin required for clotting.

It has become clear in recent years that the ability of the liver to maintain the level of plasma prothrombin depends on the presence of vitamin K in the diet and its absorption by the bowel. This vitamin abounds in lucerne, beef liver, bran, breast milk, cabbage, casein, carrot tops, peanut, spinach, tomatoes and pig liver, but is surprisingly absent from carrots, cereals, cod liver oil, egg white, lemon juice, liver extract, mangoes, potatoes, rice, wheat germ oil and yeast. It is absorbed from the bowel only in the presence of bile salts. Bacterial putrefaction in the bowel can synthesize vitamin K from certain foodstuffs from which it was previously absent.

The cause of the physiological hypoprothrombinæmia of the new-born is obscure. The level of the plasma prothrombin of most mothers is high at term. The blood passing from the placenta to the fetus is known to have a higher prothrombin level than that returning to the placenta. It is not clear whether prothrombin passes through the placenta from the maternal blood, as does albumin, or is formed in the placenta as globulin is thought to be. It does seem, however, that the placenta forms a barrier between maternal and fetal blood which prothrombin cannot pass without hindrance. Other causes suggested for the low prothrombin of the new-born include dietary deficiencies. The high level in most mothers invalidates this suggestion. The condition develops too early to be due to a dietary deficiency in the child. The lack of a well-developed bacterial flora in the intestine has been suggested as another cause. Leandro M. Tocantins¹ suggests it is a result of the functional immaturity of the liver of the new-born, and in support of his suggestion has recently described an infant in whom on the second day of life there developed pronounced jaundice together with haematemesis. The plasma prothrombin was very low and the plasma bilirubin high. The gastric bleeding was controlled by intramuscular injections of blood. As the jaundice passed the plasma prothrombin rose to normal, but the child continued to vomit its food and died on the seventeenth day. Autopsy revealed an atresia of the first part of the duodenum, causing complete obstruction to food (and vitamin K), but allowing the bile to pass freely into the lower part of the bowel. The rise in plasma prothrombin therefore could not have been due to absorption of vitamin K from the food which did not mix with bile or reach the lower part of the bowel to be putrefied. Tocantins emphasizes the presence of a severe degree of physiological jaundice and suggests that while the infant's immature liver was engaged excreting the excess bilirubin produced by the breakdown of red cells, it was unable either to release prothrombin from its store or to manufacture it from some unstated precursor. The former task completed, however, the liver rapidly poured out prothrombin to bring the blood level back to normal. Tocantins suggests that this preoccupation of the immature liver with its function of excreting the pigment of physiological jaundice is the reason why the blood prothrombin falls to a low level in the new-born, sometimes low enough to cause spontaneous bleeding. The fact that this level is lower on the second to sixth days than it is on the first day of life is consistent with his suggestion. His report would be more convincing if he told how much blood was given to the child by way of therapy during its illness, and how great a factor this was in causing a return to normal of the plasma prothrombin.

I. Newton Kugelmass,² on the other hand, accepts the normally low prothrombin level of the new-born and is con-

¹ American Journal of Diseases of Children, May, 1940.

² Archives of Disease in Childhood, June, 1940.

cerned to discover why it sometimes falls below a critical level and causes haemorrhagic disease. He blames a vitamin K deficiency in the diet of the mother, and reports several convincing examples. One was provided by a woman who had given birth to four successive children with haemorrhagic disease. During the fifth pregnancy she was found to have a low plasma prothrombin content, which was rectified by a diet rich in vitamin K. A healthy child was born. During the sixth pregnancy the mother refused diet therapy, the plasma prothrombin was low, and the child had severe haemorrhagic disease. In the seventh pregnancy diet again restored the plasma prothrombin to normal and a healthy child was born. Two other mothers were having diets low in vitamin K, their plasma prothrombin was low and their babies had haemorrhagic disease of moderate severity. The babies were given two and three cubic centimetres of vitamin K in oil by mouth. The bleeding ceased, and in eight and ten hours a considerable rise in plasma prothrombin had occurred. Kugelmass does not state whether physiological jaundice was present or not, but his results do tend to lessen the significance of Tocantins's suggestion described above, at least in so far as it is the precipitating factor of the bleeding. The truth may be that liver immaturity in association with haemolysis is the cause of the low plasma prothrombin of the normal new-born infant, which does not fall below a critical level necessary for the onset of haemorrhagic disease unless the maternal diet is low in vitamin K. Nor does Kugelmass suggest that vitamin K therapy should replace transfusion for these babies, for there is no more rapid way of supplying ready-made prothrombin than by transfusing normal adult blood, one fluid drachm of which contains enough of this substance to coagulate four times the volume of blood circulating in the new-born infant.

THE MANAGEMENT OF ACUTE PANCREATITIS.

In August of last year the management of acute pancreatitis was discussed in these pages in the light of a discussion that had been held at the Royal Society of Medicine. Divergence of views was most noticeable in regard to the advisability of operation on the one hand and the adoption of conservative measures on the other. The general conclusion was that conservative measures are being more and more widely adopted. While we do not propose to cover again the ground traversed last August, it will be useful, in view of the scarcity of reports on the subject, to call attention to a communication by L. S. Fallis,¹ who has recently advocated expectant treatment and who supports his contentions by figures from the records of the Henry Ford Hospital, Detroit. Fallis reviewed the results of immediate operation in 26 patients and found that 14 died. These figures led to the adoption at the Henry Ford Hospital of conservative treatment, with the striking result that of 16 patients so treated only one died. These figures are in line with others recently published. There seems little doubt that if a diagnosis can be made the patient's interests will be served best by expectant treatment. A proportion will require later operation for abscess or cyst formation. Fallis discusses at some length the diagnosis of acute pancreatitis, and concludes that errors are due largely to failure to think of the possibility. He considers that estimations of blood diastase content are of considerable confirmatory value, and that X-ray examination of the abdomen will help to exclude obstruction and perforation by revealing in these conditions fluid levels in the bowel or gas under the diaphragm. Unfortunately, as Hamilton Bailey has remarked, laboratory facilities tend to be at a low ebb when required for the urgent surgical case, so that the surgeon, as with most abdominal emergencies, is thrown back on purely clinical resources. It is a reflection on our medical standards that in even the larger hospitals in Australia and England, biological

chemists, hematologists, radiographers and the like, while usually available in theory, are in practice rarely appealed to at night or over week-ends. Perusal of any American journal shows that leucocyte counts and other appropriate investigations in acute cases are performed as routine measures in the same way as are estimations of temperature or pulse rate. Acute pancreatitis will tend to languish in diagnostic obscurity until laboratory services are more readily available in the early hours of the morning. In the meantime it may be concluded that when acute pancreatitis has been recognized, expectant treatment should be adopted. If, on the other hand, the diagnosis is made only when the abdomen has been opened, any surgical procedures should be strictly limited. It takes courage for a surgeon to close an abdomen without doing anything when he discovers unsuspected acute pancreatitis on performing abdominal section. If the patient's condition permits, it is possibly beneficial to remove by suction as much as is readily accessible of the blood-stained peritoneal fluid and to leave a tube in the pouch of Douglas. If gangrene or empyema of the gall-bladder is present, it is probably wise to perform a cholecystostomy. It is extremely doubtful whether attempts to drain the peripancreatic tissues are sound practice.

Naval, Military and Air Force.

APPOINTMENTS.

THE undermentioned appointments, changes *et cetera* have been promulgated in the *Commonwealth of Australia Gazette*, Number 170, of August 22, 1940.

AUSTRALIAN MILITARY FORCES.

NORTHERN COMMAND.

First Military District.

Australian Army Medical Corps.

To be Captain (provisionally)—Harvey Sylvester Walsh, 30th October, 1939. (In lieu of notification respecting this officer which appeared in Executive Minute No. 9/1939, promulgated in *Commonwealth Gazette*, No. 152, of 30th November, 1939.)

Australian Army Medical Corps Reserve.

To be Honorary Captains—Joseph Baynes Gribb, Bertie Saywell Butler-Wood, Malcolm Russell Macdonald, Alban John Olson, and Eric John Moreton Waraker, 19th June, 1940; Rupert Cecil East, 24th June, 1940; Cornelius John Ryan, 27th June, 1940; Allan Matthew Johnston and Henry Norman Knott, 5th July, 1940; James Patrick McGrath, 8th July, 1940; Horace Llewellyn Mansfield, Duncan Macfarlane Mackay and George John Whittfield, 10th July, 1940; Paul Joseph Scrope Shrapnel, James Thomas Flinmore, William Charles Corrigan, Charles Reginald Louis Church, and Harold Ashton-Shorter, 14th July, 1940.

EASTERN COMMAND.

Second Military District.

Australian Army Medical Corps Reserve.

To be Honorary Captains—Aubrey Edgar Hood, Arthur Richardson Figtree and Eric Brangwin Green, 3rd June, 1940; Albert Ernest Sparkes, 10th June, 1940; Albert Victor Neal, 14th June, 1940; Clive de la Tour Blackwell and Ernest Ingram Thomas, 15th June, 1940; Lancelot Maynard Clark, 17th June, 1940; William George Pickering, 18th June, 1940; John Llewellyn Hogg, 20th June, 1940; Sydney Levine, Ian Spence, Kevin Matthew Blair, Edward William Haggatt and Henry Bruce Maxwell, 24th June, 1940; Hugh Maxwell Tompson and Edmund Wellington Campbell, 1st July, 1940; and Lincoln Leopold Bedkober, 8th July, 1940.

WESTERN COMMAND.

Fifth Military District.

Australian Army Medical Corps Reserve.

To be Honorary Captain—Jack Edwin Throssell, 17th July, 1940.

¹ *The American Journal of Surgery*, December, 1939.

Abstracts from Medical Literature.

PATHOLOGY.

Malignant Adenoma of the Chromophobe Cells of the Pituitary Body.

O. T. BAILEY AND E. C. CUTLER (*Archives of Pathology*, March, 1940) report on three cases in which a malignant tumour arose from the chromophobe cells of the *pars anterior* of the pituitary body. These differed clinically from the usual case of benign chromophobe adenoma in the history of rapid progression of symptoms and in the rapid extension of the tumour into the skull bones adjacent to the *septa turcica*, the neighbouring brain substance and the naso-pharynx. The early stages of the illness were dominated in the first case by ocular symptoms, in the second by uncinate seizures, and in the third by nasal obstruction. Histologically the tumours were characterized by arrangement of the tumour cells in broad sheets separated from one another by a stroma which was altered in character from that of the normal *pars anterior* and was in part derived from structures at the edge of the tumour, far from the *septa turcica*. Such tumours should be set apart from the usual chromophobe adenoma and designated in a distinctive way. The term "malignant chromophobe adenoma" indicates that they are locally invasive and possess certain of the histological characteristics of malignant tumours, but do not metastasize either in the cerebro-spinal axis or elsewhere in the body. The malignant chromophobe adenoma presents certain special difficulties in differential diagnosis, especially in its differentiation from chordoma and carcinoma of the sphenoid sinus or of the naso-pharynx. The tendency of the malignant chromophobe adenoma to include large blood vessels in the sellar region makes surgical approach to it especially perilous. One of the three patients showed a very satisfactory response to biopsy followed by X-ray therapy, including the control of symptoms pointing to involvement of the temporal lobe. The other two patients, who were treated surgically, died.

The Relation of Chronic Mastitis to Carcinoma.

SHELDON WARREN read before the New England Pathological Society (*Archives of Pathology*, February, 1940) a paper on the relation of chronic mastitis to carcinoma. The basis for his study is 1,206 cases of various types of diseases of the breast which were followed for five years or longer. Exceptions to this follow-up period were cases in which carcinoma developed in less than five years after the first operation for a benign lesion of the breast. One of the most difficult problems was that of determining what the morbidity rate of carcinoma in the female population is. The author has assumed that the annual mortality rate multiplied by two would equal the annual attack rate, on the basis that the number of patients cured of cancer of the breast and the number of undiagnosed cases of cancer would perhaps equal the number of patients dying from the

disease. Although this is probably an excessively high allowance, two outstanding results were found. The first is the marked predominance of cancer in the group with antecedent pathological changes in the breast (according to the author's manner of calculation, 0.37% against 0.03%). The second is that there is nearly twelve times as much cancer of the breast developing in women of thirty to forty-nine years of age in the previously diseased group as in the general population, and only 2.5 times as much as in those over fifty years of age. The effect of antecedent pathological changes in the breast has therefore most weight when it concerns a woman in the earlier of these age groups. With regard to the histological observations in those cases in which previous changes were followed by carcinoma, it is the author's impression that the development of chronic mastitis, chronic cystic mastitis, adenoma or cystadenoma, is an expression of undue ability of the mammary epithelium which predisposes to the development of carcinoma, and that no one type of lesion can be regarded as definitely precancerous on the one hand or definitely dissociated from subsequent development on the other. From the practical standpoint one is faced with the fact that in an average follow-up period of ten years there were 42 cases of cancer of the breast against a calculated expectancy, every conservative adjustment being used, of 13 cases. This incidence of mammary cancer following a pre-existing lesion of the breast is not sufficiently great to demand bilateral mastectomy as a preventive measure. The incidence is, however, sufficiently great, particularly among women of the younger age groups, to move one to consider them as constituting a special risk group that should be followed with great care, probably at least at six-month intervals, with resort to amputation when any suspicious change in the breast is noted. In the discussion following the paper several speakers confirmed the author's observations and agreed with his conclusions.

Metastatic Neuroblastoma in Bone.

R. A. WILLIS (*The American Journal of Pathology*, May, 1940) reports on a case of an adolescent girl in whom a large tumour of the femur was found, with characteristics conforming in every way with those of "Ewing's sarcoma" as usually described, and of over three years' duration. At autopsy the tumour was found to be a metastasis from a primary neuroblastoma of the left lumbar sympathetic chain. Some recent publications regarding "Ewing's tumour" are reviewed, with the conclusion that the subject is chaotic, that the occurrence of a primary growth of bone of this nature is still unproven, and that metastatic growths of various types, especially neuroblastoma, will probably prove to be responsible for many of the cases.

Malignant Granulosa-Cell Tumour of the Ovary.

ALTHOUGH a large number of granulosa-cell tumours of the ovary have been reported, especially in recent years, as granulosa-cell carcinoma, it is doubtful whether the name "carcinoma" should be universally applied to them. A majority of the reports deal with tumours removed at operation. Only a few of the patients have been followed for a period of five years after operation, and there are no

detailed post-mortem reports on those whose death was due to metastases. J. S. McCARTNEY, junior (*Archives of Pathology*, February, 1940) therefore reports a granulosa-cell carcinoma of the ovary which developed fourteen years after the menopause and which produced cystic hyperplasia of the endometrium with uterine bleeding. Five years after removal of the tumour there appeared signs of involvement of the opposite ovary. This was also removed. Death occurred one year later, or six years after the first operation. *Post mortem*, metastases were found in the mesenteric lymph nodes, the peritoneum and the brain. The diagnosis of granulosa-cell carcinoma should, according to him, be reserved for the tumours of granulosa-cell type which are definitely malignant.

Capillary Rupture with Intimal Haemorrhage in the Causation of Cerebral Vascular Lesions.

J. C. PATERSON has previously described capillary rupture with intimal haemorrhage in relation to the precipitation of coronary thrombi. It has been shown that intimal haemorrhages result from the rupture of capillaries derived from the arterial lumina, not from the backflow of blood through intimal defects, as was previously thought. Because intimal haemorrhages are a common finding at the sites of precipitation of coronary thrombi, it appears fairly certain that the two lesions are cause and effect. Recently he has suggested that pulmonary thrombi may sometimes be precipitated by similar intimal haemorrhages. In his present paper (*Archives of Pathology*, March, 1940) he describes intimal haemorrhages due to capillary ruptures in sclerotic cerebral arteries, and discusses the relation of these haemorrhages to certain cerebral vascular lesions, namely, arteriospasm, thrombosis and cerebral haemorrhage. From his observations it appears that capillary rupture with intimal haemorrhage is intimately concerned with the mechanism of cerebral arterial thrombosis and possibly, in certain cases, with the causation of cerebral arteriospasm and rupture. It is suggested that the factors responsible for the rupture of intimal capillaries in the cerebral arteries are high intracapillary pressure from hypertension, progressive atherosomatous degeneration of the supporting tissues and increased capillary fragility from a variety of causes.

Intracystic Papilloma of the Breast.

INTRACYSTIC papilloma of the breast is according to O. SAPHIR and M. L. PARKER (*The American Journal of Pathology*, March, 1940), one of the less common and perhaps least understood tumours of the breast, for the reason that intracystic papilloma was, and often still is, confused with other lesions of the breast, all of which are agglomerated and classified symptomatically as "bleeding nipple". Today it is fully realized that what has been called "bleeding nipple" may be either an intracystic papilloma, a papillary carcinoma of the duct or so-called chronic cystic mastitis. Since microscopic intraductile papillomata often constitute an integral part of so-called chronic cystic mastitis, it is clear that "bleeding nipple" is the result of intraductile cellular proliferations, either in the form of a true tumour, papilloma or carcinoma, or merely in the form of cellular reactions as seen in certain

cystic diseases of the breast. Histological investigation of 58 intracystic papillomata of the breast reveals three distinct varieties of these tumours: a fibrous type, a glandular type, and a papilloma consisting of cells which closely resemble the transitional epithelium of the urinary bladder, and hence may be designated as the transitional cell type. Both the fibrous and glandular types are benign tumours which do not recur. They often extend into the neighbouring ducts, but cannot be regarded as precancerous. The transitional cell type of papilloma morphologically is a benign tumour. However, it may recur after removal, and some of the recurrent tumours may show morphological evidence of malignancy. Intracystic papillomata of the breast are as a rule multiple. In instances of fibropapilloma and glandular papilloma not only is excision indicated, but also the removal of a circumscribed region of the breast surrounding the tumour, because of the fact that often these tumours are multiple. There is no danger that carcinoma may develop on the basis of these lesions. In instances of transitional cell papilloma of the breast simple mastectomy is indicated, because of the possibility that these lesions are perhaps tumours which, although histologically benign, may possess an inert degree of malignancy not recognizable by our present staining methods. After mastectomy the prognosis in these cases seems good.

MORPHOLOGY.

Cerebral Cortex, Pons and Cerebellum.

S. SUNDERLAND (*The Journal of Anatomy*, January, 1940) presents an experimental investigation of the fibre relations of the cortex, pons and cerebellum as determined in macaques. He finds that fronto-pontine fibres arise in area 6 of the cortex, run in the medial part of the *basis pedunculi* and terminate in the rostral half of the pons on the same side; parietal, occipital and temporary fibres run in the lateral segment of the basis and terminate in the rostral three-fourths of the pons on the same side, the parietal fibres extending most caudally. The ponto-cerebellar connexions are almost exclusively crossed. The rostral half of the pons projects to the *tubus medius*; there does not appear to be any anatomical or physiological localization. Probably, differentiation in the pontine nucleus depends more upon cortical relationship than upon cerebellar connexions.

The Suprarenal Gland and Artificial Fever.

J. G. BERNSTEIN (*The American Journal of Anatomy*, March, 1940) has investigated a possible relation between endocrine function and body temperature regulation by subjecting albino rats to sublethal exposures of ultrahigh frequency radiations. Exposures were conducted for 10-minute periods per day for a term of 10 days; the average rectal temperature after the exposure was 101.3° F., a rise of some 3.2°. The author found that this treatment produced definite histological changes in the tissues. In the suprarenal gland these changes were indicated by a marked increase in the lipid content of the cortex. This increase may be attributed either to

increased secretion or to increased storage. The author concludes that the changes indicate that the suprarenal cortex is concerned, directly or indirectly, with the mechanism for temperature regulation, and that disturbance of this mechanism produces glandular changes.

The Greater Omentum.

R. L. WEBB AND P. H. SIMER (*The Anatomical Record*, April, 1940), admitting the fact of hypertrophy of the greater omentum after pathological and experimental stimulation, have investigated the possibility of its regeneration after removal. The greater omentum was resected in three dogs and the result was observed after periods of six and a half, fifteen and a half and twenty-four months. There were no adhesions after these periods, and in no case was there any trace of omental regeneration. The authors consider that absence of the greater omentum entails no impairment of health.

The Sphincter of Oddi.

R. L. KREILKAMP AND E. A. BOYDEN (*The Anatomical Record*, April, 1940) have studied the sphincter around the human choledocho-duodenal junction by a maceration technique. In the twelve cases studied there was a strong *sphincter choledochus* in all, a *sphincter pancreaticus* occurred in four and a *sphincter ampulla* in only two. The authors found also a set of fibres reinforcing the eye-shaped slit through which the bile and pancreatic ducts enter the duodenal wall. A *sphincter ampulla* is present constantly in the fetus; its subsequent degeneration in the majority of cases apparently accounts for reflux of contrast medium into the pancreatic duct in patients who have been subjected to cholecystotomy.

The Platysma Muscle.

G. S. LIGHTOLLER (*The Journal of Anatomy*, April, 1940) has made a comparative study of the evolution of the human platysma muscle. In lower mammals, in addition to a noto-platysma on the back of the neck, a *sphincter colli profundus* appears on each side of the front of the neck. In rodents the fibres of the two sphincters cross and continue forwards superficial to the noto-platysma as a *sphincter transitus*. In marsupials the *sphincter transitus* becomes separated from the *sphincter profundus*, and in monotremes and anthropoids the *sphincter profundus* disappears, leaving the *sphincter transitus* as the final (tracheo-) platysma.

The Excitable Cortex in Marsupials.

A. A. ABIEE (*The Journal of Comparative Neurology*, June, 1940) has conducted an extensive experimental investigation on the excitable cortex in a series of Australian marsupials. He finds the excitable cortex distributed around the orbital sulcus and, contrary to tradition, invariably six-layered in structure. In polyprotodont marsupials only the head and forelimb receive cortical representation; in diprotodonts representation is extended to include the hind limb.

The Caninus Muscle.

G. S. LIGHTOLLER (*The Journal of Anatomy*, April, 1940) has considered the morphology of the caninus muscle in a selected series of mammals, including man. He questions Ruge's

view that the caninus is derived from the *orbicularis oris*: the *orbicularis* is superficial, the caninus deep. In subprimates the author describes a *pars profunda* of the *musculus maxillo-naso-labialis*; it is usually extensive, and lies deep to the infraorbital nerve. In primates the *musculus caninus* and the *musculus incisivus* observe the same relations and attachments, and they probably represent the *pars profunda* of the *maxillo-naso-labialis*. The author considers that the main functions of the caninus and incisivus are to support the vestibule and upper lip; in man these muscles are also adapted to the function of speech.

Hyperrotation of the Colon.

F. N. LOW AND W. C. HILDEMAN (*The Anatomical Record*, May, 1940) describe a case of left-sided caecum and appendix due, not to maldevelopment of the mesentery or reversal or arrested development, but to hyperrotation. They consider the case unique. The tip of the caecum lay behind the peritoneum to the left of the third lumbar vertebra, the appendix to the left of the fourth. Thence the colon passed down behind the peritoneum into the *pelvis minor*, whence it emerged into the right iliac fossa. Thereafter its course was normal. The condition occurred in a middle-aged negro, in whom the other abdominal viscera were normal.

Boutons Terminaux.

J. MINCKLER (*The Anatomical Record*, May, 1940) has observed and counted the nerve terminals in relation to nerve cells in a large number of human spinal cords. He was unable to find any terminals before the ninth month of postnatal life. After this period terminals are found in relation to all nerve cells in the cord except those of the *substantia gelatinosa*. The terminals are grouped as loops (small, large, filamentous and fibrillated) and masses (opaque or granular). As far as the axone is concerned the loops may be terminal or preterminal; their size varies from 0.5/1.0 μ to 3.5/5.0 μ . The author found that the number of terminals on any cell is related to the size of the cell; also that the bouton density is related to function. Actual counts of boutons gave a lower figure than estimates based upon the assumption of uniform distribution. It is believed that a single ventral horn cell, together with its dendrites, probably carries several thousand boutons; counts gave 833 per cell for the cells of the postero-lateral column, and only 88 for the cells of the dorsal sensory column.

The Monotreme Cortex.

A. A. ABIEE (*The Journal of Comparative Neurology*, June, 1940) has investigated the laminar pattern of the cerebral cortex in *Ornithorhynchus* and *Tachyglossus*. In both animals he describes fourteen cortical areas. He believes that one part of the cortex is related to the hippocampal formation (parahippocampal cortex) and the other to the piriform formation (parpiriform cortex). The parahippocampal cortex occupies the front of the hemisphere and is mainly effector in function; the parpiriform cortex occupies the back of the hemisphere and is mostly receptor in function. In *Ornithorhynchus* the piriform lobe is very small and the parpiriform cortex greatly reduced. The author questions many of the homologies advanced by Brodmann and others.

Special Articles on Psychiatry in General Practice.

(Contributed by request.)

X. OBSESSIVE STATES.

Definition.

BERNARD HART has described an obsession as "an idea, action or fear intruding itself into consciousness in a manner which is felt by the patient as irresistible". An obsession has a compulsive, insistent quality; but the person who experiences it recognizes its subjective origin, regards it with displeasure and attempts to suppress it.

Obsessive Ideas.—Obsessive ideas take the form of some thought, perhaps a question, or a tune which cannot be driven out of the mind. The question may be of a speculative nature, touching on some religious or philosophical topic, for which the patient fails to provide an answer. The emphasis continues to remain on the question, for no attempt is indeed made to find an answer. This feature of the obsessive state (*folie de pourquois*) is closely related to the attitude of doubt (*folie de doute*), indecision and uncertainty (*insuffisance psychologique*), which is the essential weakness in the patient's personality. These eternal questionings and fruitless speculations may be regarded as a morbid substitute for a more adequate and energy-consuming adaptation.

And thus the native hue of resolution
Is sicklied o'er with the pale cast of thought
And enterprises . . . lose the name of action.

Sometimes the obsessive thoughts take the very distressing form of associated religious and sexual or obscene ideas.

Obsessive Fears.—Obsessive fears are in themselves not easily distinguished from the fears which occur in the anxiety neuroses, for they tend to overwhelm the mind in attacks and are accompanied by considerable emotional disturbance. Fears of heights, of crowds, of sharp objects and of numerous other situations and things have been given Greek names, which are apt to create the impression that acrophobia and agoraphobia, for example, are different clinical conditions, whereas the general attitude of mind of the patient is usually of much more importance than the exact nature of the fear that he may express. Anyhow, these phobias rarely appear as "single spies".

Obsessive or Compulsive Acts.—Obsessive or compulsive acts take the form of needless repetitions and useless actions of various kinds, such as the impulse to count aloud, to touch certain objects, to arrange things in a certain way, to do things over and over in order to make certain. An associated symptom is the patient's urge to make pacts or conditions with himself: "If I do (or do not) do this, something will (or will not) happen." Obsessive acts serve no useful purpose and, like the ideas or fears, may so dominate the mind that a normal life becomes impossible, but they rarely, if ever, lead to conduct which is either dangerous or criminal. Obsessive thoughts of some criminal action are not translated into conduct.

In most instances the obsessional neurosis develops in persons who have exhibited obsessive features for many years, often from childhood. Quite commonly children display such obsessive features as pacts, the compulsion to count and touch or to act in certain precise ways, but in the majority all this is just a phase without any immediate or remote neurotic sequelae. On the other hand, the true obsessional personality becomes early enslaved to excessive precision in action, over-scrupulousy, to an inconveniently insistent conscience, and to a striving towards unattainable perfection. Indecision and self-dissatisfaction hamper his conduct, and as he grows older all these features become accentuated. It is this weak synthesis of the personality that Pierre Janet terms psychasthenia. But one meets with all grades of this obsessional tendency, from the progressive type just described to the type in which the obsessions are weak or latent and become inconvenient for a time only when resistance has been lowered after some illness or unusual emotional stress.

Differential Diagnosis.

A distinction should be made between the obsessional neuroses and the following conditions.

Dissociation.—While it is convenient to speak of a defective synthesis of mental functions in the obsessional neuroses, the condition is quite unlike the alternation of personality which may occur in hysteria. The hysteric has a more or less complete amnesia for his emotional crises, fits, fugues and somnambulisms, while the obsessional remains acutely and unpleasantly conscious of the incompatible elements in his mind.

Impulsive Actions.—Impulsive acts occur without forethought and are not resisted (so-called irresistible impulses). Some crimes of violence would appear to take place without premeditation.

In rare instances kleptomania may be a symptom of an obsessional state, but more often the accused is no more psychopathic than any other offender, and few can produce any convincing evidence of having tried to overcome the urge to steal. The same applies to most cases of sexual assault and indecent exposure, in which the sexual instinct is gratified in this perverse manner, sometimes with premeditation, but often blindly.

Delusions.—Delusions are erroneous beliefs which are accepted by the patient and are a true part of himself. There is a degree of conviction which is quite different from the attempt to reject and repudiate an obsessive idea. It may be noted that in a popular and even in a dictionary sense the term obsession is often used to describe what is medically recognized as a delusion. One may sometimes observe in the early stages of schizophrenia obsessive ideas, into which the patient has good insight, gradually change into hallucinations and delusions as the patient loses his grasp on reality and fails to distinguish between self and environment and projects his own thoughts onto some external object.

Preoccupation.—Preoccupation is a state of mental absorption in which some idea constantly holds the focus of attention. The idea may be distressing—for example, the memory of a departed friend or the anticipation of some catastrophe—but there is none of that sense of futility and disconnection with the rest of the thought processes which characterizes an obsession. Any dominant motive, such as ambition, involves some degree of mental preoccupation. In hypochondria there is preoccupation about health with or without insight, according to the other mental features.

Psychoses.—Reference has already been made to obsessional features in schizophrenia in which also one may watch a transition from compulsive to impulsive acts as control is gradually lost. Obsessional ideas and fears are not uncommon in the early stages of melancholia, particularly the involutional type. Insight is gradually lost, and, as in the case of prodromal anxiety states, depression, self-depreciation and delusions of unworthiness, ruin and disease dominate the clinical picture. In other cases one sees obsessions in a setting of much milder depression, together with loss of mental and physical energy, occurring as a phase or attack which passes off in due course.

The difference between obsessional fears and morbid anxiety is one of the emphasis which the patient places on, or the degree with which he is for the time concerned with, the idea as distinct from the emotional state. The obsessional is distressed by the idea that something will happen while retaining some realization of the absurdity, while the anxiety neurotic is overwhelmed by an emotional state in which he actually feels afraid. Practically the distinction is not of great importance, for diagnosis and treatment depend more on the personality setting and other features of the case. Obsessional ideas and actions are sometimes met with as sequelae of epidemic encephalitis, usually in a setting of Parkinsonism.

Treatment.

When the obsessions are symptomatic of a psychosis treatment must, of course, be directed towards the primary condition. The recognition of any depressive element in the clinical picture and the absence of obsessional tendencies in the patient before the attacks is of great importance from the standpoint of diagnosis and treatment, for such patients are likely to get well in time. The true obsessional neurosis, which manifests itself in childhood or adolescence, is progressive, and treatment can be only palliative. After some physical illness or after a period of unusual intellectual or emotional stress, there is apt to be an exacerbation of neurosis which may be dealt with by measures designed to improve the physical condition and to encourage mental rest. Otherwise the obsessional must be advised according to his particular needs. He should continue to live as full and active a life as possible, and he may be directed to avoid those situations which seem most likely to aggravate his symptoms—a counsel of perfection indeed. Some may find relief in receiving an explanation of the mental mechanisms at work after a brief analysis of the mode of development of the obsessional tendencies. But it cannot be claimed that deep analysis, however interesting the associations elicited thereby, is of help towards rehabilitation, and there comes with it the danger that the treatment and dependence on the analyst afford the patient an unhealthy gratification. The "flight into neurosis" is apt to proceed further to the even less desirable refuge in treatment.

Children.

Judgement must be exercised with regard to the desirability of treating obsessional tendencies in children. The

adult obsessional seeks advice because of the discomfort and inconvenience of his symptoms, while a child may be brought by an over-anxious parent. A few compulsive actions may be of little significance if the child is not otherwise a slave to precision and limited in his interests and general behaviour. Much will depend on the personalities of his parents, and a temporary removal from a fussy or overstrict régime may be all that is necessary. In the adolescent, obsessions may be traced to religious and sexual conflicts, which call for investigation and advice. Again, attention to external influences and the direction of interests and energy into more suitable channels will play an important part in treatment.

W. S. DAWSON, M.D., F.R.C.P.
Professor of Psychiatry, University
of Sydney; Honorary Psychiatrist,
Royal Prince Alfred Hospital.

British Medical Association News.

ANNUAL MEETING.

THE annual meeting of the South Australian Branch of the British Medical Association was held in the lecture theatre at the Institute of Medical and Veterinary Science, Frome Road, Adelaide, on June 27, 1940, Dr. M. ERICHSEN, the President, in the chair.

Annual Report and Balance Sheet.

The annual report of the council for the year ending June 30, 1940, and the balance sheet were adopted on the motion of Dr. R. J. Verco, seconded by Dr. F. St. J. Poole. The balance sheet is published herewith; the annual report is as follows.

Election.

At the annual meeting held last June officers and members of the council were elected as follows:

President: M. Erichsen.

Vice-President: R. John Verco.

Honorary Medical Secretary: C. B. Sangster.

Honorary Treasurer: F. St. John Poole.

Ordinary Members of Council: C. F. Drew, J. Riddell and L. A. Wilson.

At the council meeting held on July 6, 1939, the following subcommittees were appointed:

Scientific: P. T. S. Cherry, C. F. Drew, J. M. Dwyer, M. Erichsen, C. B. Sangster, R. John Verco, L. A. Wilson.

Contract Practice: R. G. Burnard, P. T. S. Cherry, C. F. Drew, M. Erichsen, F. St. J. Poole, J. Riddell, D. M. Steele, A. F. Stokes, R. John Verco.

Library: J. M. Dwyer, M. Erichsen, Sir Henry Newland, C. B. Sangster.

Parliamentary Bills: P. T. S. Cherry, J. M. Dwyer, A. F. Stokes, R. John Verco.

Revision of Rules: M. Erichsen, Sir Henry Newland (E. Britten Jones, co-opt).

Ethical: R. G. Burnard, P. T. S. Cherry, C. F. Drew, J. M. Dwyer, M. Erichsen, J. Riddell, A. F. Stokes, C. B. Sangster, R. John Verco.

Meetings.

The Council.—The council has met on 19 occasions, the attendance being: R. G. Burnard, 14; P. T. S. Cherry, 17; C. F. Drew, 14; J. M. Dwyer, 18; M. Erichsen, 16; Sir Henry Newland, 14; F. St. John Poole, 16; J. Riddell, 12; A. F. Stokes, 14; C. B. Sangster, 16; D. M. Steele, 11; R. John Verco, 17; L. A. Wilson, 15.

Scientific Subcommittee.—The Scientific Subcommittee met twice, the attendance being: P. T. S. Cherry, C. F. Drew, J. M. Dwyer, M. Erichsen, C. B. Sangster, R. John Verco, L. A. Wilson.

Contract Practice Subcommittee.—The Contract Practice Subcommittee has met on seven occasions, the attendance being: R. G. Burnard, 4; P. T. S. Cherry, 5; C. F. Drew, 4; M. Erichsen, 7; F. St. J. Poole, 6; J. Riddell, 3; D. M. Steele, 1; A. F. Stokes, 3; R. John Verco, 7.

Library Subcommittee.—The Library Subcommittee met once, the attendance being: J. M. Dwyer, M. Erichsen, Sir Henry Newland, C. B. Sangster.

Ethical Subcommittee.—The Ethical Subcommittee met on three occasions, the attendance being: R. G. Burnard, 2; P. T. S. Cherry, 2; C. F. Drew, 1; J. M. Dwyer, 2; M. Erichsen, 2; J. Riddell, 1; A. F. Stokes, 3; C. B. Sangster, 3; R. John Verco, 2.

Monthly General Meetings.

Eight scientific meetings were held during the year. The country meeting was held at Narracoorte this year on September 30, 1939, and the council tenders its thanks to

Dr. H. K. Pavay for his assistance in arranging matters for the meeting. Through the courtesy of the Director of Air Raid Precautions an invitation was extended to all members of the Branch to attend two lectures delivered by Dr. S. W. Pennywick on August 21 and 30 on "War Gases". The following programme was carried out during the year:

1939.

July 27.—Clinical meeting.

August 31.—Paper by Dr. E. Weston Hurst on "Some Facts Concerning Virus Diseases". (Discussion opened by Professor Cleland.)

September 30.—Country meeting at Narracoorte. Paper by Mr. L. C. E. Lindon on "Some Aspects of the Management of Head Injuries". (Discussion opened by Dr. C. E. King.)

October 26.—Joint paper and demonstration by Mr. Ivan Jose and Dr. N. J. Bonnin on "Treatment of Acute Intestinal Obstruction and Paralytic Ileus".

November 30.—Paper by Dr. F. N. Le Messurier, "Some Problems and their Management in the First Year of Life". (Discussion opened by Dr. M. T. Cockburn.)

1940.

February 29.—Paper by Dr. F. L. Wall on "Recognition and Treatment of Difficult Labour". (Discussion opened by Dr. B. H. Swift.)

March 28.—Paper by Dr. E. McLaughlin on "Some Aspects of Gastric Function". (Discussion opened by Dr. K. S. Hetzel.)

April 25.—Papers by Dr. R. L. Thorold Grant (clinical) and Dr. J. Stanley Verco (radiological) on "Some Aspects of Pulmonary Diseases of Childhood".

May 30.—Listerian Oration.

Listerian Oration.
The council invited Dr. A. W. Holmes à Court, of Sydney, to deliver the Listerian Oration this year. The invitation was accepted and Dr. Holmes à Court delivered the Oration on May 30, his subject being "Chemotherapy of Pneumococcal Infections". There was a good attendance and the council desires to record its sincere thanks to Dr. Holmes à Court. At the close of the Oration those present were entertained at supper in the refectory, University, by the President.

Membership.

The membership of the Branch is 409, an increase of 13 on the previous year. The number of new members elected was 19, the balance representing transfers "in and out", deaths *et cetera*. It is with deep regret that we record the deaths of A. V. Benson, a past President of the Branch, and H. S. Covernton.

Resignations as Representatives on Boards *et cetera.*

During the year Dr. L. C. E. Lindon resigned as representative on the Dental Board of South Australia, owing to pressure of work, and Dr. Alan H. Lendon was appointed in his place. Owing to his absence from the State on military duties, Dr. S. R. Burston resigned as representative on the Nurses' Board, and Dr. L. A. Wilson was appointed. The council tenders its thanks to Dr. Lindon and Dr. Burston for their services.

Representation on Boards *et cetera.*

Medical Board of South Australia: H. H. E. Russell.

Dental Board of South Australia: Alan H. Lendon.

Nurses' Board of South Australia: L. A. Wilson.

Metropolitan Infectious Diseases Hospital Board: H. H. E. Russell, G. R. West.

Australian Aerial Medical Services Council: A. F. Stokes.

Executive Council, Mothers' and Babies' Health Association: D. G. McKay.

Executive Committee for Protection of Civil Population against Gas Attack: F. H. Beare.

State Committee for Coordination of Medical Arrangements for Civilians and the Services: M. Erichsen, C. Yeatman.

Central Council of the Association: Isaac Jones.

Federal Council of the British Medical Association in Australia: Sir Henry Newland, A. F. Stokes.

Federal Council Contract Practice Committee: R. John Verco.

Sections.

Eye, Ear, Nose and Throat Section.—This section held three meetings during the year, and consists of 16 members, the average attendance at meetings being eight.

Surgery.—Three meetings were held, the average attendance being 15. The section consists of 36 members.

Anesthetics.—This section consists of nine members, one meeting being held during the year.

Clinical Medicine.—This section consists of sixty members; two meetings were held during the year.

History.—This section consists of nine members, one meeting being held during the year.

Lodge Practice.

The council intended during the year to review the present lodge agreement with a view to making certain alterations and provisions. A request was received, however, from the Federal Council asking the Branches not to amend their common form of agreements until such time as the question of the adoption of a Federal common form of agreement had been considered by the Federal Council and the Federal Executive of the Friendly Societies Association.

Federal Common Form of Lodge Agreement.

The Federal Council has for some time past considered the question of a Federal common form of lodge agreement. The Federal Contract Practice Subcommittee, comprising representatives of the Branches, including our own representative (Dr. R. John Verco), with knowledge of lodge work, was asked to submit details for a suggested agreement. A draft of these has now been printed and forwarded to the Branches for discussion. This has engaged the attention of the Branch Contract Practice Subcommittee, and later members will be called together to consider and, if desired, make any recommendations regarding it.

Lodge Members on Active Service Overseas.

After conferences with representatives of the Friendly Societies Association, upon certain undertakings being given by the friendly societies, the council decided to make similar concessions to lodge members going overseas on active service to those in the last war, and attend the wife and children of such member for the duration of his active service in the present war at the single unit fee. Also single lodge members on active service overseas are to be retained on the lodge surgeon's list without payment of the single unit medical fee and have the right to resume their place on the list after discharge.

Adelaide Permanent Post-Graduate Committee.

Dr. E. Britten Jones and Dr. L. C. E. Lindon, representatives of the council on the committee, have been granted leave of absence whilst on active service.

Owing to the war, the committee has decided not to hold the usual post-graduate course this year.

Recognition of Chiropodists.

For a considerable period negotiations have been carried on between the council and representatives of the South Australian Society of Chiropodists (Incorporated) and the Pharmaceutical Chiropodists, following a request by these bodies that the Association should assist in raising the standard of chiropody in South Australia. After several conferences the council felt that before any further discussions could take place it was desirable that the South Australian Society of Chiropodists and the Pharmaceutical Chiropodists should amalgamate and form one body, and this suggestion was submitted to them. No further action has been taken by the council.

Registration of Foreign Medical Practitioners.

This matter has had the close attention of the council during the year, and the Medical Board of South Australia was approached with a view to seeking their advice and cooperation regarding the registration of refugee doctors. It was found, however, that under the present *Medical Act* the board was compelled to register certain of these doctors, and the only course open was to approach the Government and endeavour to secure an amendment to the Act. The Federal Council also approached the South Australian Government on behalf of the Branch. A deputation from the Branch waited on the Premier on September 27 and asked the Government not to register any refugee doctors for the duration of the war and twelve months afterwards, but should license them to practise in outlying districts, where there were no resident doctors, or be utilized by the Government in their departments, if any shortage of doctors arose owing to members of the profession enlisting for active service. Following this, an amendment to the *Medical Act* embodying the representations of the deputation was prepared under the direction of the solicitors of the Branch and submitted. An amending act was subsequently introduced by the Government at the close of the last session of Parliament, but the debate was adjourned. Such a result was disappointing, as the bill was purely a war measure, to limit the rights of alien doctors to register in this State and prevent them practising in areas where members of the Association were absent on active service. It was admirably designed and in the best traditions of British justice and fair play. It is the intention of the council to again approach the Government before the next parliamentary session and ask for the protection provided in the amending bill.

Pensions for Sufferers from Early Tuberculosis.

The council, feeling that this was a Federal matter, approached the Federal Council of the British Medical

Association and asked that it be taken up with the Federal Government. This was done, the Federal Council laying emphasis on the importance of the economic factor in the control of tuberculosis, and urging the introduction of a system of family endowment by the Government which would enable early curative treatment to be instituted and the family of the tuberculosis patient to be adequately provided for. The Commonwealth Minister of Health has advised that whilst the value of such a system as suggested by the Federal Council, if it could be instituted, is fully recognized, it was regretted that the Commonwealth Government, under existing circumstances, is unable to consider this addition to its financial obligations. It was felt by the Council of the Branch that the matter should not be allowed to rest there, and considered that an authoritative statement from the Association in the Press might stir the State Government into action. Before doing this it was decided to approach the Government by deputation, and this took place on May 21, at the Chief Secretary's office, when the matter was placed before him by speakers on behalf of the Association, who urged the Government to formulate some plan of relief for sufferers from tuberculosis in the early stages. The Chief Secretary promised to look into the matter to see if anything could be done on the lines suggested by the deputation.

National Health Insurance.

The Federal Government decided not to proceed further with the original proposals. Indications, however, that the Government will proceed with a scheme of national health insurance have been given by Sir Frederick Stewart, and he has already conferred with the Federal Council Contract Practice Subcommittee and discussed the matter with them. The Federal Council is now waiting on the next move by the Government as a result of this conference.

New Rules and By-Laws.

The new rules were adopted at a special general meeting of the Branch held on April 10, 1940, and are in course of printing. Copies will be sent to members in due course.

Australasian Medical Congress (British Medical Association)—Sixth Session.

Owing to the war, the sixth Australasian Medical Congress, which was due to be held in Perth during September, 1940, was postponed indefinitely.

Railway Hospital Funds.

These funds for employees of the South Australian Railways are in operation in many of the country centres, and in view of their relation to contract practice service, the council has asked the Contract Practice Subcommittee to make inquiries into the matter and report to the council.

Subscriptions of Members Proceeding Overseas on Active Service.

It has been decided to make a reduction of one-third of the amount of the annual subscription to those members who proceed overseas on active service.

Professor A. Watson.

The council sent congratulations to Professor Watson on his ninetieth birthday. Professor Watson is a past President of the Association and retains the sincere regard of many members of the Association.

War Emergency Organization.

At the outbreak of war it was considered advisable to devise means by which some protection against financial loss would be given to those members who would proceed overseas on naval, military or air force service. The council therefore instituted inquiries in order to ascertain if any workable financial plan could be formulated. This matter has caused a great deal of concern and extra work, involving many extra meetings, but every effort has been made to carry out the expressed wish of members, that some scheme should be arranged whereby the heavy financial loss which would result from members leaving their practices would to some extent be lightened. Several schemes were considered, including those of Branches in the other States, with a view to ascertaining the best method of dealing with the position, which is a difficult one, and would possibly have been less difficult if general mobilization had taken place. However, the council decided first to adopt the main principles of the "model scheme of the Federal Council" as a basis on which the most satisfactory results could be achieved. On details of this being sent to members, meetings were called in the different suburbs, and as a result "area schemes" have been adopted, are in operation, and are working satisfactorily. A special committee has been appointed to deal with any dispute in connexion with the scheme. It is felt, however, that notwithstanding the "area scheme" members would require greater financial assistance, and the council has endeavoured to provide a form of financial protection beyond this. The result in this, however,

has been very disappointing, and the efforts of the council have been impeded by the small number of members who have expressed their willingness to cooperate in this direction. The council is very loath to abandon its efforts and is proceeding with further inquiries in the hope of being able to bring about an arrangement that can be financially successful. Whatever scheme is in operation, or decided on in the future, its success will depend entirely on the individual integrity, loyalty and cooperation of members, and the council appeals to members to do all in their power in this direction.

Annual Dinner and Golf Tournament.

Owing to the war, it was decided not to hold the annual dinner and golf tournament this year.

General Remarks.

This report is necessarily a brief summary of the amount of work done by your council during the year. Owing to these months of world anxiety and crisis, many special meetings have been held dealing with national as well as domestic matters. The council has endeavoured in every way to cooperate with and assist the military authorities

in their arduous duties, and we thank them for their consideration of the medical profession in the arrangement of the roster of medical officers. A great deal of extra work has again been placed on the Lay Secretary this year, and we extend to him our sincere thanks for his help, loyalty and devotion to duty.

In conclusion, I desire to thank members of the council for their helpful and loyal support during my year as President.

(Signed) M. ERICHSEN,
President.

Election of Office Bearers.

The President announced that the following office bearers had been elected for the ensuing year:

President: Dr. R. John Verco.

Vice-President: Dr. Brian H. Swift.

Honorary Treasurer: Dr. P. T. S. Cherry.

Honorary Medical Secretary: Dr. J. L. Hayward.

Members of Council: Dr. L. R. Mallen, Dr. J. A. Rolland, Dr. E. A. H. Russell, Dr. C. B. Sangster, Dr. J. Stanley Verco.

Income and Expenditure Account for Year ended December 31, 1939.

	f	s	d	f	s	d	f	s	d
To British Medical Association, London	478	15	3						11 18 1
" Medical Journal of Australia..	376	0	0	854	15	3			
" Library Subscriptions ..	69	15	0						
" Federal Council Capitation Fees ..	79	4	0						
" Postages and Telegrams ..	63	5	6						
" Stationery and Printing ..	78	11	2						
" Telephone ..	50	13	1						
" Rent ..	46	8	0						
" General Expenses ..	118	17	4						
" Depreciation ..	7	0	0						
" Salary ..	450	0	0						
" Lister Medal ..	0	10	0						
" Balance transferred to General Fund ..	261	16	2						
				£2,080	15	6			
							£2,080	15	6

Balance Sheet as at December 31, 1939.

LIABILITIES.	f	s	d	ASSETS.	f	s	d
To Subscriptions paid in advance ..	10	10	0	By Plant and Fittings ..	70	0	0
" British Medical Association, London—				" Less Depreciation ..	7	0	0
Paid Subscriptions ..	51	6	0				63 0 0
Unpaid Subscriptions ..	42	14	3	" British Medical Hall Company Limited, Share Account ..			2,440 0 0
				" Library Account—			
				Delineascope ..	24	0	0
" Medical Journal of Australia—				Projector ..	34	0	0
Paid Subscriptions ..	39	0	0				58 0 0
Unpaid Subscriptions ..	33	10	0	" Less Depreciation ..	6	0	0
							52 0 0
" Library Fund ..	406	12	9	" Savings Bank Library Fund ..			239 1 9
" Sundry Creditors ..	77	17	3	" Lister Medals and Dies ..			16 3 4
" National Health Insurance Contribution Fund ..	313	16	7	" Subscriptions Owing ..			298 2 7
" National Bank of Australasia, Limited ..				" Stocks—			
				Hospital Forms ..	0	15	7
" General Fund ..	3,300	6	11	Medical Certificate Books ..	1	16	5
				Stationery ..	10	0	0
							12 12 0
				" British Medical Hall Company Limited ..			173 13 6
				" Listerian Oration Account ..			22 12 1
				" Savings Bank, National Health Insurance Contribution Fund ..			313 16 7
				" Sundry Debtors ..			42 12 1
				" Cash—			
				Commonwealth Savings Bank ..	154	17	10
				Savings Bank of South Australia ..	431	11	10
				In Hand ..	24	17	11
							611 7 7
							£4,285 1 6

WALTER C. DOBBIE, Secretary.

We hereby report: (1) That we have examined the Books and Accounts of the British Medical Association, South Australian Branch, for the year ended December 31, 1939. (2) That we have received all the information and explanations we have required. (3) That in our opinion, and subject to some reserve being made in respect of subscriptions owing, the above Balance Sheet is properly drawn up so as to exhibit a true and correct view of the affairs of the Association as at December 31, 1939, according to the best of our information, the explanations given us, and as shown by the books produced.

Adelaide,
May 18, 1940.

F. ST. JOHN POOLE, Honorary Treasurer.

MUECKE PICKERING AND COMPANY,
Chartered Accountants (Australia),
Auditors.

Induction of President.

Dr. M. Erichsen then introduced the President for the ensuing twelve months, Dr. R. John Verco.

President's Address.

Dr. M. Erichsen, the retiring President, read his address (see page 209).

Votes of Thanks.

A vote of thanks to Dr. Erichsen was carried on the motion of Dr. B. H. Swift, seconded by Dr. E. A. H. Russell.

Votes of thanks to the retiring members of the council, to the Honorary Treasurer and to the Lay Secretary were carried on the motion of Dr. R. E. Magarey, seconded by Dr. H. Halloran. Dr. R. G. Burnard replied on behalf of the retiring members.

Correspondence.**WAR BLINDNESS AND ITS PREVENTION.**

SIR: I am sure your editorial of July 27 will be read by all ophthalmologists within the Australian Imperial Force and militia forces, because it draws attention to a very important phase of recruiting, namely, the eyesight of those who are enlisting. It must be evident to them all that no men should be accepted for either overseas or home services with defective vision unless the nature of that defect is ascertained. I advocate this course for two reasons. Firstly, those who have read Sir Arnold Lawson's book (which you quoted in your leading article) will remember that he found more blindness at Saint Dunstan's due to defects being missed at enlistment, and such defects progressing to ultimate blindness, than he found due to war trauma itself. Secondly, the defects should be ascertained so that after the war, when the repatriation scheme is in full swing again, records will be available to define the nature of the lesion shown by the recruit before he undertook overseas or home service. It will probably be pointed out that sufficient oculists would not be available for this service; but when it is understood that it is not in those rejected with defective eyesight, but only those accepted in spite of defective eyesight, that the condition of the defect should be ascertained, will it be realized that the work would not be very onerous.

Only recently Dr. K. Sharp, Chairman of the Committee of the Nationalist Institution for the Blind, Prevention of Blindness Committee in Great Britain, announced that the greatest cause of blindness at the present time is war strain and war trauma. We cannot eliminate the war trauma, but we can eliminate the war strain by not accepting recruits whose defective vision is due to active lesions within the eye. Of course, those whose defective eyesight is within the limits set down by the military authorities, and not due to active lesions, would be accepted as usual.

May I again say how timely your warning is, and hope it is not too late yet to profit by the experience of blindness in the last war.

Yours, etc.,
J. BRUCE HAMILTON.

174, Macquarie Street,
Hobart,
August 14, 1940.

Obituary.**GEORGE FRANCIS SLEEMAN.**

We regret to announce the death of Dr. George Francis Sleeman, which occurred on July 21, 1940, at Melbourne, Victoria.

ROBERT SCOTT.

We regret to announce the death of Dr. Robert Scott, which occurred on August 14, 1940, at Buninyong, Victoria.

WILLIAM ROBERT NUTTALL MALONEY.

We regret to announce the death of Dr. William Robert Nuttall Maloney, which occurred on August 29, 1940, at Melbourne, Victoria.

EDWARD JOHNSTONE JENKINS.

We regret to announce the death of Dr. Edward Johnstone Jenkins, which occurred on August 30, 1940, at Sydney, New South Wales.

NOTICE.

THE next library seminar arranged by the Post-Graduate Directors of Medicine, Surgery and Pathology, will be held at the Prince Henry Hospital, Little Bay, New South Wales, on Monday, September 9, 1940, at 4.30 p.m. The subjects will be: (i) "Liver Therapy in Diseases other than Pernicious Anemia" and (ii) "The End Results of Infection of the Urinary Tract". A cordial invitation to be present is extended to all medical practitioners.

A CLINICAL meeting of the medical staff of the Royal Prince Alfred Hospital, Sydney, will be held at the hospital on Thursday, September 12, 1940, at 4.30 o'clock p.m.

Diary for the Month.

SEPT. 6.—Queensland Branch, B.M.A.: Branch (Jackson Lecture).
SEPT. 10.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
SEPT. 10.—Tasmanian Branch, B.M.A.: Branch.
SEPT. 13.—Queensland Branch, B.M.A.: Council.
SEPT. 17.—New South Wales Branch, B.M.A.: Ethics Committee.
SEPT. 18.—Western Australian Branch, B.M.A.: Branch.
SEPT. 19.—New South Wales Branch, B.M.A.: Clinical Meeting.
SEPT. 24.—New South Wales Branch, B.M.A.: Medical Politics Committee.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Honorary Secretary, 135, Macquarie Street, Sydney); Australian Natives' Association; Ashfield and District United Friendly Societies' Dispensary; Balmain United Friendly Societies' Dispensary; Leichhardt and Petersham United Friendly Societies' Dispensary; Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney; North Sydney Friendly Societies' Dispensary Limited; People's Prudential Assurance Company Limited; Phoenix Mutual Provident Society.

Victorian Branch (Honorary Secretary, Medical Society Hall, East Melbourne); Associated Medical Services Limited; all Institutes of Medical Dispensaries; Australian Prudential Association, Proprietary, Limited; Federated Mutual Medical Benefit Society; Mutual National Provident Club; National Provident Association; Hospital or other appointments outside Victoria.

Queensland Branch (Honorary Secretary, B.M.A. House, 225, Wickham Terrace, Brisbane, B.17); Brisbane Associate Friendly Societies' Medical Institute; Proserpine District Hospital. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 178, North Terrace, Adelaide); All Lodge appointments in South Australia; all Contract Practice appointments in South Australia.

Western Australian Branch (Honorary Secretary, 205, Saint George's Terrace, Perth); Wiluna Hospital; all Contract Practice appointments in Western Australia.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: MW 2651-2.)

Members and subscribers are requested to notify the Manager, THE MEDICAL JOURNAL OF AUSTRALIA, Seamer Street, Glebe, New South Wales, without delay, of any irregularity in the delivery of this journal. The management cannot accept any responsibility or recognize any claim arising out of non-receipt of journals unless such a notification is received within one month.

SUBSCRIPTION RATES.—Medical students and others not receiving THE MEDICAL JOURNAL OF AUSTRALIA in virtue of membership of the Branches of the British Medical Association in the Commonwealth can become subscribers to the Journal by applying to the Manager or through the usual agents and booksellers. Subscriptions can commence at the beginning of any quarter and are renewable on December 31. The rates are £3 for Australia and £2 5s. abroad per annum payable in advance.